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# CLAYTONIA

Newsletter of the Arkansas Native Plant Society

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## Every Rose Has Its Prickle

By Andrew Ruegsegger

It's an oft-repeated joke among plant-lovers that, if you're not careful, preparing for a hike may never take you past the parking lot. This is owed to the fact that plant-lovers share an affinity for the minutiae that give rise to the diversity of the vegetative world—getting caught up in the details is kind of our whole thing. Anybody unfamiliar with this detailed diversity might be surprised at *just how much* there is to see in a parking lot.

***The thorns on this Carolina rose (Rosa carolina) and all roses are technically prickles. Photo by Eric Hunt.***

But when an hour into the plant walk led by Richard Abbott and Melanie Rudolf at Rattlesnake Ridge—a 373-acre property managed by The Nature Conservancy and home to Wright's cliffbrake fern (*Pellaea wrightiana*), a species of state conservation concern, and the rare Ouachita Mountain Sandstone Outcrop Barrens—hadn't taken our group out of sight of the parking lot, it wasn't for an abundance of plant diversity or even for any grand display of late summer asters; being such a dry part of the late summer, the leaves of most plants drooped, and flowers (especially the showy kind) were in short supply. Rather, it was because, in lieu of flowers or vegetative abundance, Dr. Abbott decided to share with us his encyclopedic knowledge of his patterns-method to plant identification he has cultivated and refined over a lifetime of studying plants across the globe.

***Melanie Rudolf (center) kicking off the plant walk/ workshop with Richard Abbott (right). Photo by Andrew Ruegsegger.***

Conducting more of a workshop in field identification than a simple plant walk, the master of mnemonics led us on a dizzying journey of acronyms and shared characteristics to look for that guide the spectator through the vast world of plant taxonomy to arrive

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at particular families and genera. For example, MADCap allows you to narrow down the woody, opposite-leaved plant you're looking at to either maple, ash, dogwood, or honeysuckle (Caprifoliaceae family). If you want to narrow down the genus of that vine snaking its way close to the ground, consider TAN: tendril at node. If it's TAN, it'll be either a grape, a squash, or a passionflower. If you can't find tendrils on the vine, pick it up and admire its compound, trifoliate leaf structure, as Dr. Abbott demonstrated early on in the workshop, and you can be almost certain you're looking at *Toxicodendron radicans*, better known as poison ivy (he assured us that the urushiol doesn't tend to affect him *that* badly and rubbed some dirt on his fingers afterwards to be safe).

He didn't only go over pattern identification, though. For example, did you know that, according to Dr. Abbott—forgive me if I'm getting this wrong—, the reason ragweed (*Ambrosia* spp.) tends to inflame the histamine responses of so many of us, in addition to its wind-pollinated abundance, is because the pollen literally tries to fertilize your eyes shortly after landing? Gross, if true. We also learned about the differences between prickles, thorns, and spines; because, yes, botanists have a word for everything. Epidermal outgrowths like on greenbrier (*Smilax*) or roses (*Rosa*), for example, are actually prickles! Of course, as Dr. Abbott pointed out, 'every rose has its prickle' isn't nearly as catchy as 'every rose has its thorn.' I guess that's why botanists name plants, and rock bands like Poison write hit songs. Thorns are modified branches (think of honey locust or black locust), and spines are modified leaves (cactus!). Also, pokeberry (*Phytolacca*) gets its beet-red color from a lipid-soluble pigment called betalain. I'm adding this part on myself,

***Rattlesnake Ridge group. Photo by Gregory Rajsky.***

but it was an ink colored with these poke-pigments that Thomas Jefferson dipped his quill into to pen the U.S. Constitution. No joke. At least, that's what the Internet says.

Finally, returning back to the whole patterns-method of identification, here's an overlooked character of legumes for the uninitiated: look to the base of the petiole for a tiny characteristic called the pulvinus. If it is strongly swollen, you might just have a legume. That gets us back to the main thrust of the workshop: you don't need to (and can't) remember the way every plant looks to get started in field identification. Instead, just knowing characteristic patterns of plant families or genera like leaf arrangement or margin morphology or pulvinus swollen-ness—what detailed diversity!—can help you both in identification and in understanding the relationships between different plants. It's a point that maybe anyone familiar with a dichotomous key understands intuitively, but having those patterns elaborated by someone so well-versed in them was an invaluable experience. Having such an animated instructor willing to pick up poison ivy just to point out some characters only made the information that much more memorable.

(P.S. - We did eventually get a little ways away from the parking lot and saw a few neat, albeit common, plants in flower or fruit like flowering spurge (*Euphorbia corollata*), a senna (*Senna* sp.), pokeberry (*Phytolacca americana*), camphorweed (*Pluchea camphorata*), a very fragrant mountain mint (*Pycnanthemum* sp.), and others that I'm forgetting or didn't note.)

***Dr. Abbott pointing out a woody plant to discuss his patterns-method of field identification. Photo by Gregory Rajsky.***

# Aging Shortleaf Pine Stands

By Willa Thomason

Shortleaf pine (*Pinus echinata*), a commercially valuable conifer with a native range spanning 440,000 $mi^2$ across 22 states throughout the southeastern United States, was heavily logged throughout the 19th century through the mid-20th century. It is estimated that, by World War I, original uncut old-growth shortleaf pine stands were reduced by 60 to 80 percent. Populations of this species have continued to decline from 1980 to as recently as 2013 for several reasons, including land clearing, altered fire regimes and succession to hardwood species, disease and pest infestations, and hybridization with loblolly pine (*Pinus taeda*).

***The view from Big Pine Hollow southwest overlooking the Upper Buffalo River valley. While the shortleaf pine tree in the foreground was not included in the sampled plot, it is roughly 25 cm DBH, and perhaps 120 years of age. The asymmetrical structure of the tree's crown is typical of shortleaf pines growing towards full sunlight on the bluff line surrounded by dense hardwood canopy. The small size and asymmetrical canopy make this pine unsuitable for commercial lumber harvest. Photo by David Stahle.***

Old-growth shortleaf pine-bluestem ecosystems provide critical habitat for the endangered Red-cockaded Woodpecker (RCW; *Picoides borealis*), as well as other species. Several organizations, including the Western Arkansas Woodland Restoration Project (WAWRP), the Shortleaf Pine Initiative (SPI), and the U.S. Forest Service (USFS) have undertaken efforts to restore shortleaf pine ecosystems. In conjunction with the WAWRP and the SPI, the USFS has successfully restored approximately 150,000 acres in the Ouachita National Forest to near pre-settlement conditions using mechanical mid-story stand thinning, followed by prescribed burns every 3-5 years. RCW populations, which depend on old-growth southern pine ecosystems for survival, have more than doubled in response to these management treatments. Additionally, shortleaf pine chronologies serve as a powerful proxy for pre-instrumental climate. Tree ring chronologies derived from the few old-growth shortleaf pine stands remaining have the strongest correlation with summer precipitation totals yet detected for any tree species in the United States.

Shortleaf pine stands in the interior Boston Mountains are unusual in that they exist primarily above bluff lines at relatively small topographic breaks in the hardwood canopy. This differs from the larger, more open and pine-dominant stands of the Ouachitas or elsewhere in the Ozarks. The primary goal of this project was to locate several undisturbed old-growth shortleaf pine stands in the rugged interior Boston Mountains, to analyze their age-structure and species composition, and to further inform plans to restore the declining species. To accomplish this, four study sites were established in the interior Boston Mountains of Newton County, and one, a perimeter Boston Mountains site selected for comparison with the four interior sites, was established near the Mulberry River in Franklin County. Several 0.1 ha plots were established at each site, where I, with help from friends and colleagues, identified trees to species, measured their diameter at breast height (DBH), and cored every shortleaf pine tree with a DBH $\geq$ 10 cm.

The fieldwork for this project led me to some of the steepest, most rugged bluff lines the Boston Mountains has to offer on the wild hunt for old-growth shortleaf pine. One of the most wonderful, and sometimes frustrating, aspects of dendrochronology is its inherently low-tech nature. While GIS, drones, and remote sensing techniques can help to pinpoint probable pockets of old-growth, these tools are no substitute for the human eye, and this project required me and my helpful friends and colleagues to bushwhack for miles up and down the steepest hills in the Ozark National Forest. Of course, the bushwhacking was only a warm-up for the tree coring to follow. While shortleaf pine is soft and relatively easy to core, heart-rot was common among the oldest trees observed in this study, leading to a gross underestimation of their maximum age, and turning promising old-growth encounters into frustrating and exhausting tug-of-wars to retrieve stuck increment borers.



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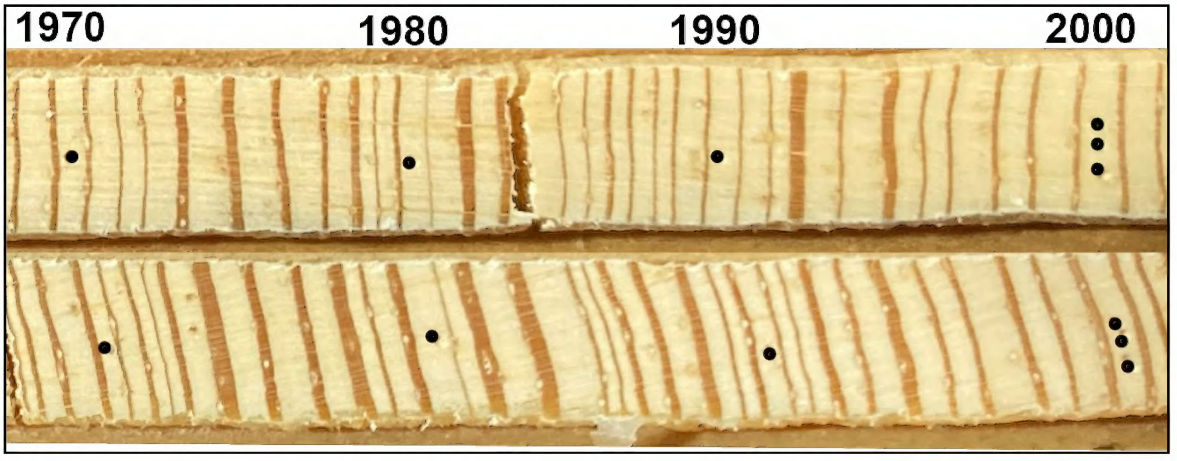
***A typical bluff line with shortleaf pine in the Upper Buffalo River watershed of the Boston Mountains. While no cut stumps or other indications of human disturbance were apparent at any of the study sites, broken stumps indicating death due to environmental causes were common. Photo by Willa Thomason.***

The rare encounter with a heavy-limbed, and gnarled vestige of the days prior to the 19th Century timber boom in the Arkansas Ozarks more than compensates for the hours of strenuous exertion, but this was not the only reward of fieldwork for me. Every time I ventured into the field, I saw something beautiful; azaleas at peak bloom, a newly emerged luna moth, lions mane mushrooms, giant hollow beech trees, and waterfalls galore. One of my favorite days in the field was last May when Jennifer Ogle accompanied me to one of the sites in Newton County to help with tree identification. We were walking through one of the study plots when something erupted in a flurry a few feet to our left, making both of us jump. We looked down to see that we had nearly stepped on a brooding turkey hen and her clutch of no less than a dozen eggs!

The lab work, though more tedious than field work at times, yielded an abundance of raw data. After coring approximately 435 shortleaf pine trees across the five study sites, each core was mounted, sanded, dendrochronologically dated, and measured for earlywood and latewood ring width. Species composition, basal area, relative frequency, and stem density were calculated for each plot, and new site chronologies were developed using the Douglas method of ring-width crossdating. The derived ring-width chronologies were also correlated with gridded precipitation and temperature data for North America from 1950-2021 to define the seasonality, strength, and spatial scale of the moisture signal.

While the purported maximum age attainable for shortleaf pine is around 400 years, the expected life span of shortleaf pine is typically 140-250 years, and the oldest trees observed in this study did not exceed that expectation. The oldest minimum age observed in this study was a 242-year-old tree sampled at the Mulberry River site, and the tree was cored to pith at breast height. We cored a 43 cm DBH tree at Big Pine Hollow, but because the tree had heart-rot the radius of the core was only 13 cm. We aged it to 241 years, and through we were certain it was older we can't know exactly how much older it was. Overall, only 7 trees out of the total 435 that were dated and measured attained ages of 200 years or more.

The five old-growth pine sites described in this study represent only a subset of the native shortleaf pine stands present in the pre-settlement environment and it is probable that there are other small stands of old-growth shortleaf pine still present above bluff lines elsewhere in the Boston Mountains. I am so grateful and honored to have received the Delzie Demaree Research Grant, without which this project would not have been possible. THANK YOU to the Arkansas Native Plant Society for this incredible support!




***Cores from two different trees sampled at the Upper Buffalo River. Each sampled core was dendrochronologically dated, and measured for earlywood, latewood, and total ring-width. Note the excellent crossdating between the two cores, particularly in the latewood growth. The total ring-width variation in these cores is representative of the highest and lowest years of growth in the Upper Buffalo chronology. The ring-width for 1978, among the years of lowest growth, is visibly thin here, while the growth ring for 1994, one of the years of highest growth, is thick in these samples.***

# Plants to Entice a Child's Mind (Part 2)

By Sarah Geurtz

***Lonicera sempervirens*** — Coral Honeysuckle. This native honeysuckle vine isn't aggressive like the invasive Japanese Honeysuckle. Sadly, it seems to not contain as much nectar as the Japanese Honeysuckle. I found that on this native honeysuckle, a good way to get to the nectar is to pinch off the very green base of the flower and suck the nectar out (*instead of pulling out the pistil from the flower's end, which is how I grew up getting nectar from the Japanese Honeysuckle*). As an added benefit, the vine will usually hold some flower buds through much of the winter, which add a bit of color. Its plump red berries are also very attractive.

***Coral honeysuckle (Lonicera sempervirens). Photo by Eric Hunt.***

***Ludwigia alternifolia*** — Seedbox. In the late fall and winter, this plant holds upright seedheads with a small hole in the top. What makes them so interesting is that they are squarish in shape – like a tiny box! When the seeds are ripe, turn a seedbox over and dust-like seeds will spill out of the hole into your hand!

***Rhexia*** — Meadowbeauties. Like *Ludwigia alternifolia,* in the late fall and winter, this plant's seedpods hold tiny seeds. Instead of a "box" seed capsule, though, the capsule is in the shape of a *vase* – perfect for accompanying a story about fairies.

***Clinopodium arkansana*** — (Arkansas Mint/Ozark Calamint) also has a very strong minty scent and is shorter than the ones listed above.

***Physostegia virginiana*** — Obedient Plant/False Dragonhead. In the later part of summer, this native perennial produces spires of lavender, pale pink, or white tubular flowers. When the individual flowers are gently pushed sideways, the flower will stay that way for a while. Hence the name of "obedient plant." Children will enjoy trying this out on their own. After trying that, ask them if they can figure out why it is also called False Dragonhead. I bet they'll figure it out! Note that this is also a rhizomatous spreader so plant accordingly.

***Obedient plant (Physostegia virginiana). Photo by Eric Hunt.***

***Pycnanthemum albescens/pilosum/tenuifolium*** — Mints. These are some of our native mint species. The foliage's minty scent will delight everyone. Keep in mind that they are rhizomatous spreaders like the invasive non-native mints, so if planting them in a small space, plan accordingly with barriers (or let them duke it out with other aggressive spreaders).

***White-leaf Mountain Mint (Pycnanthemum albescens). Photo by Eric Hunt.***



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***Rubus*** species — Raspberries, Blackberries, Dewberries. Try growing one or more of these for the berries and let your child experience the taste of the different stages of ripeness. Once the berries are ripe, they can make a little picnic for you!

***Scutellaria*** — Skullcaps. Many of the skullcaps offer fun seedpods – flip the pods over and they look exactly like tiny baseball caps! Kids *love* this plant because of this! The tubular flowers that precede them attract hummingbirds - an added kid bonus. *Scutellaria incana* (Hoary Skullcap), in particular, has a long summer blooming time which will provide many bird sightings. If you grow *Scutellaria parvula* (Southern/Leonard's Skullcap), tell children that the plant decorates itself with necklaces. Let them wonder at that weird statement and then have them dig in the ground – this plant is rhizomatous and the rhizomes grow what are called moniliform tubers along its roots. The roots look like beaded necklaces! However, do this digging during the growing season, as the tubers are supposed to decompose over the winter. To find this plant, you'll likely have to grow it from seed, as I've never seen plants of it offered in AR (*hint, hint to native plant growers!*). Another interesting thing about *Scutellaria parvula* is that some of its flowers remain closed and self-pollinate (called cleistogamous).

***Skullcap (Scutellaria parvula). Photo by Eric Hunt.***

***Verbesina virginica*** — Frostweed. Grow some of this plant and let the fall frost flowers be a welcome surprise for a child. Cold temperatures cause the sap to freeze and extrude from the stem. As the sap flows, further sap pushes upwards and freezes, pushing the earlier-frozen sap outwards. This results in beautiful, curling, extrusions of sap. You may again see frost flowers later during the winter, but they generally are not as showy as those first ones.

After the first truly cold winter morning, check to make sure the Frostweed has "bloomed" because you don't want to let the children down. Then, wake the children, throw on your robes, and run out in great excitement to "see if the frost flowers have bloomed." You're bound to leave an exciting and lasting memory. A word of caution, though – if you plant this in a garden (instead of an area that is "wild" in character, do *not* allow it to flower and set seed! It is a prolific self seeder.

***The frost flower of Frostweed (Verbesina virginica). Photo by Sid Vogelpohl.***

***Zizia aurea*** — Golden Alexander. This native carrot relative will invariably attract Swallowtail Butterflies to lay eggs on it. When the eggs hatch and the caterpillars get large, you might get to see their defense mechanism – they extrude what's known as their osmeterium from behind their "heads." It's an orange, forked organ that resembles a snake's tongue. It also produces a very stinky smell which is sure to delight kiddos. I once raised some eggs in my home and I *could not* scare the caterpillars into doing this for my daughter – I suppose they had no fear of us. Wild caterpillars did it quite readily, though. The stench their small bodies can produce is shocking!

***Osmeterium on a swallowtail larva. Photo by Jamie Newton.***

# Gillam Park— Mindful of its Past, Hopeful for its Future

By Jennifer Ogle

Little Rock's Gillam Park is a hotspot for naturalists, drawn to its more than 400 acres of diverse habitats that support many types of wildlife. The Arkansas Natural Heritage Commission has identified several plant community types there, including glades and woodlands on outcrops of igneous rock known as nepheline syenite, upland white oak forest, mesic riparian and stream terrace forest, wooded seeps and springs, hardwood flatwoods, cypress sloughs, and seasonally flooded bottomland hardwood forest. It also has plenty of disturbed areas, partly due to its history as a city park.

***Seedbox (Ludwigia alternifolia). Photo by Virginia McDaniel.***

Gillam Park was named for Isaac Taylor Gillam Sr., a Black citizen of Little Rock who was born a slave in 1839 in Tennessee. During the Civil War, he enlisted in the Union army at Little Rock, and after the war had a long and successful political career in Arkansas. Unfortunately, during much of the late 20th century, his namesake park was remembered more for its negative cultural history than for his accomplishments or the significant natural features that make it so popular today. In the 1930s the City of Little Rock bought the property, which was then located just outside of the city limits within the Black community of Granite Mountain, to relocate its growing transient jobless and homeless population during the Great Depression. In 1935, a bond was passed to develop the site as a segregated city park, but it was not actually built until after World War II, and then only in response to protests from the Black community. At about the same time, Gillam Park became the foundation of a slum clearance and urban redevelopment plan that aimed to relocate much of Little Rock's Black community into that area of the city.

If you are interested in delving deeper into this important aspect of the park's history, the Encyclopedia of Arkansas entry on Gillam Park is worth a read. Audubon Delta also recounts some of this history in photographs on the walls of their Little Rock Audubon Center, on their website, and during guided tours of the property, which is how I first learned of it. In 2005, Audubon leased the property from the city and has since managed it as a wildlife preserve and community education center. The preserve has several miles of public walking trails, and Audubon staff have developed programming at their Little Rock Audubon Center for cen-

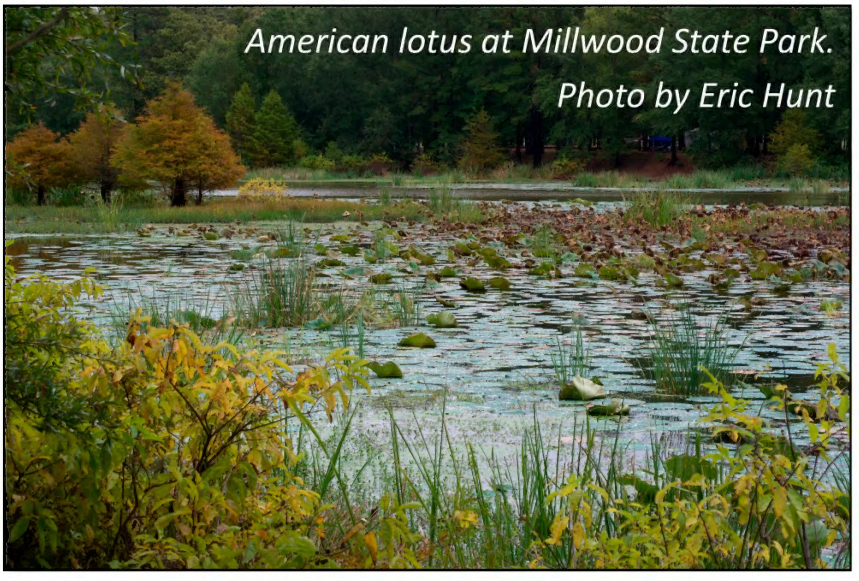
## SAVE THE DATE!

FALL 2024

MEETING

OCTOBER 4-6

MINERAL SPRINGS, AR



*American lotus at Millwood State Park. Photo by Eric Hunt*



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***Jennifer Ogle teaches the group a plant. Photo by Andrew Ruegsegger.***

tral Arkansas K-12 students and for underserved, low-income communities in Little Rock. They also have a summer internship program for teens.

On the morning of October 1, the last day of the Fall 2023 ANPS Meeting in Little Rock, 20 people met me and Virginia McDaniel for a tour of Gillam Park's plants and natural features. Because conditions were so dry during our visit, we decided to focus on the low and (we hoped) wet or at least moist areas of the preserve near Fourche Creek. That turned out to be a solid plan for botanizing at this incredibly dry time of the year. After a brief introduction to the site that included a discussion on the park's history, we set out to find some plants.

Andrew Ruegsegger, ANPS's newly elected Vice President, kept a copy of ANHC's checklist for the site and recorded new plants the group found as we walked slowly downhill from the parking lot near the old swimming pool to the cypress slough. Shortly after we set out, a tiny ring-necked snake (*Diadophis punctatus*) that was resting in the middle of the asphalt path nearly derailed the entire trip, but after a few minutes almost everyone had recovered from the cuteness overload, and we were able to resume our walk to the slough.

By the end of the trip, we had record-

***Horned beak sedge (Rhynchospora coniculata). Photo by Eric Hunt.***

***Above: Banded sphinx moth larva eating Ludwigia. Photo by Steve Collins. Below: Banded sphinx moth. Photo by Jose Amorin.***

***Dry bald cypress slough. Photo by Virginia McDaniel.***



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ed 23 new plants for ANHC's list. Notable additions included slender false foxglove (*Agalinis tenuifolia*) and thimbleweed (*Anemone virginiana*) in the disturbed upland woods along a gravel road, and cedar elm (*Ulmus crassifolia*) and overcup oak (*Quercus lyrata*) in the bottomland hardwood forest. Once we reached the slough, we took some time to enjoy all the plants that were thriving in the mud and along the slough's edges - horned beaksedge (*Rhynchospora corniculata*), white grass (*Leersia virginica*), arrowhead (*Sagittaria platyphylla*), seedbox (*Ludwigia alternifolia*), camphorweed (*Pluchea camphorata*), and water elm (*Planera aquatica*) to name a few, all new additions to the checklist.

***The Gillam Park Group. Photo by Greg Rajsky.***

The group also documented six species of moths, including some monstrous banded sphinx (*Eumorpha fasciatus*) caterpillars that were eating leaves of water purslane (*Ludwigia palustris*). Despite receiving less than a half an inch of rain in the month before we visited, many of the park's plants and animals were clearly thriving.

Today, Audubon is working with the City of Little Rock and ANHC to develop a conservation easement for the property that, once finalized, will forever protect it as a nature preserve.

We are mindful of Gillam Park's past each time we visit. Thanks to the present action of these groups, we have reason to be hopeful for its future.

# Welcome, New ANPS Members!

**These members have joined ANPS since the last issue of *Claytonia*, from August 14, 2023 to March 6, 2024:**

Rudy Allen (Little Rock, AR)
David Bevans (Little Rock, AR)
Audrey Cobb (Little Rock, AR)
Alison Cowles (Conway, AR)
Barbara M. French (Little Rock, AR)
Laurie Gaines (Bigelow, AR)
Tracy L. Garstka (Little Rock, AR)
Kathryn Gold (Maumelle, AR)
Dawn Gregory (Ogden, UT)
Nadine Bozek (Cherokee Village, AR)
Jeff Hanks (Little Rock, AR)
Sam Harper (Little Rock, AR)
Whitney Hartgraves (North Little Rock, AR)
Ingrid Karklins (Leslie, AR)
Cathi Kindt (Hot Springs, AR)
Bonnie La Borde Johnson (Metairie, LA)
Beth & Fletcher Lambert (Lonkin) (Little Rock, AR)
Louisiana Native Plant Society
Margaret Morehart (Greenbrier, AR)
Joshua Poland (Bentonville, AR)
Marrian Ramsfield (Fayetteville, AR)
Kara Richey (Jonesboro, AR)
Sarah Roberson (Fayetteville, AR)
Melanie Rudolf (Little Rock, AR)
Hope Shastri (North Little Rock, AR)
Barry Snow (Little Rock, AR)
Gene Sparling (Hot Springs, AR)
Cherilyn Stewart (North Little Rock, AR)
Bo Verser (Heber Springs, AR)
Jonathan Young (Little Rock, AR)

**New Life Members**
Ginger Allinson (Benton, AR)
Jennipher Boone (Little Rock, AR)
Tom Dillard (Malvern, AR)
Alan Dean Flanagan (Fort Smith, AR)
Douglas Myers (Huntsville, AR)
Jami Nash (Jonesboro, AR)
Isaac Ogle (Fayetteville, AR)
Gregory Rajsky (Melbourne, AR)

# Southeastern Grasslands Initiative Expands into Arkansas

by Theo Witsell

In mid-January, with mixed emotions, I left a wonderful 25-year career with the Arkansas Natural Heritage Commission for a new role as the Chief Conservation Officer for the Southeastern Grasslands Institute (SGI). Now in its seventh full year, SGI is significantly expanding its staff and geographic base of operations with the addition of five new staff positions in Arkansas, and another 15 new positions east of the Mississippi River.

The new team in Arkansas, the "western grassland science team", will include an ecologist, biologist, and field technician, all based in Little Rock with me, and a tribal liaison who will be based in western Arkansas. Another "eastern grassland science team" with the same structure will be based in Clarksville, Tennessee and Cherokee, North Carolina. These teams will be conducting extensive field work to classify, inventory, and map remnant grassland habitats across their respective regions, with the goal of advancing the knowledge and conservation of grassland biodiversity.

***A remnant dolomite glade in Fulton County with several globally rare plant species. This site needs restoration work to reverse decades of encroachment by eastern red-cedar (Juniperus virginiana) trees in deeper soiled barrens around the margins of the opening. Photo by Theo Witsell.***

**What is SGI?**

SGI is a science and conservation organization based at Austin Peay State University in Clarksville, Tennessee, where it is affiliated with the Center of Excellence for Field Biology. We operate across a broad geography with staff based in Georgia (Athens and Atlanta), Florida (Melrose), Tennessee (Clarksville and Chattanooga), Virginia (Roanoke), and now Little Rock. The organization was founded by Dr. Dwayne Estes and myself in 2017 and by the end of this year will have 30 full time employees as well as a number of part-time, seasonal technicians spread across our 24-state focal region,

**The SGI Focal Region**

SGI operates across "the biogeographic southeast", an ecologically-defined region that includes all or parts of 24 states. This is the region of the eastern U.S. that was never glaciated and where "southeastern flora and fauna" are found in remnants of natural ecosystems. It extends from the eastern edge of the Great Plains, in east-central Texas and Oklahoma, north to the southern limit of the Pleistocene glaciation, and east and south to the coasts.

***A map of the Southeastern Grasslands Institute Focal Region created by SGI and NatureServe. Areas in green had a significant grassland and open grassy woodland component historically and areas in white were mostly forested or open water.***

**What Does SGI Do?**

We find, study, restore, and work to protect grasslands of all types. We also take a "big tent" approach in defining "grasslands" to include prairies, barrens, glades, balds, savannas, bogs, fens, dunes, river-scour, meadows, marshes, and even the grassy open woodlands often associated with many of these communities – basically any naturally occurring open ecosystem with sun-dependent species. Our main focus is on finding and saving remnants - the precious surviving scraps of these ancient ecosystems - and all the imperiled biodiversity they sustain. We also work to re-create grasslands on appropriate sites.

Our list of projects is ever expanding and varies geographically, but in Arkansas we are currently partnering with the US Fish and Wildlife Service to identify and help restore high priority examples of remnant grassland ecosystems on private lands, and our science team will begin work in May to document, map, inventory, and classify different types of grasslands, many of which are poorly understood, and have not been formally described or classified.

We are particularly excited about an online grassland-focused science and history portal we are developing with funding from the National Park Service, USDA Natural Resources Conservation Service, and USDA Farm Service Agency. This portal, which we are calling *Grasslandia*, will serve as a "one stop shop" for information on grassland ecology, biodiversity, history, conservation, and a decision support tool for grassland restoration.

**Learn More**

Check us out online at www.segrasslands.org/ and on Facebook at www.facebook.com/southeasterngrasslands/.

# The Concatenators
# Introducing the Eric and Milanne Sundell Award

*Concatenate – to link things [people] together.*

*We came for the native plants, but we stayed for the camaraderie, the community. This is the environment that Eric and Milanne have helped create.*

- Jennifer Ogle

***Eric and Milanne Sundell on an ANPS hike. Eric holding Hairy Phacelia. Photo by Sid Vogelpohl.***

*You have championed me through all these years on continuing my education and all the work I've done in research.*

- Brent Baker

If you have attended an Arkansas Native Plant Society Meeting in the last 30 or so years, there are two people you were sure to have encountered: Eric and Milanne Sundell. Like with many pairs, the bower bird comes to mind here, there is the showboat and the one who gets stuff done. But together they make a family, a community that endures through time. So it was with Eric and Milanne in forming this home we call ANPS. Eric was the showboat. Sure he had street cred: a founding member of the ANPS in 1980 and botany professor at the University of Arkansas at Monticello where the herbarium carries his name. But what we remember is how he dazzled us all with his incredible knowledge of the most mundane of sidewalk weeds and rare plants alike, and made us all fall in love with plants with his complex yet goofy way of talking about them. Meanwhile, Milanne was getting stuff done. She was in the background, but a constant presence building the solid foundation of ANPS with her welcoming spirit, with conversation, with kindness and hard work. Without Milanne, the Eric we know is not possible. And together they form the solid trunk of this organization or, as Isaac Ogle says, they are the mortar that holds us all together. The concatenators.

*They are just good folks and part of what makes ANPS so special.*

- Karen Fawley

*You blew me away with your knowledge and your enthusiasm for plants and you ignited that passion in me. I teach the way you taught me, the way you taught all of us, with quirky, fun stories... It really makes it stick.*

- Sarah Geurtz

Because of the Sundells' dedication and commitment to the Arkansas Native Plant Society, the board decided unanimously to create a new Award – The Eric and Milanne Sundell Award which adds to the 4 others already in existence. If you missed the fall meeting you can watch the ceremony here: https://youtu.be/VxSA06VczBc?si=DX8_ZwbJU0sJvz-l

*He could make people who had never been around plants come [to a Master Naturalist class]."*

- Larry Price

*Eric was doing good if you got far enough down the trail that you couldn't see the parking lot. The reason why everyone joked about that was because he knew so much about every plant and was so captivating in his storytelling that you were just enthralled about each one.*

- Theo Witsell

# Fall Business Meeting Minutes

Arkansas Native Plant Society
Business Meeting, September 30, 2023
Little Rock Audubon Center
4500 Springer Blvd., Little Rock, AR 72206

The Arkansas Native Plant Society held its Fall 2023 Business Meeting at the Little Rock Audubon Center, Little Rock, AR.

President Joe Ledvina called the meeting to order. Joe thanked the Members for coming to the meeting and he thanked the Little Rock Audubon Center for providing the meeting space to ANPS at no charge.

Joe reported that the Saturday morning and afternoon field trips went very well in spite of the dry, hot weather. Joe thanked the field trip leaders for leading the various hikes. Diana Soteropoulos said that the yard tours, which were held for the first time, also went very well. Joe asked Sunday's field trip leaders to describe the hikes for the next morning. The field trip leaders then told members what they could expect to see and where to meet.

Leslie Patrick gave the Treasurer's Report and explained notable income and expense items for the year to date. Grants and awards were higher than usual but after several years of Covid-related awards inactivity, there were more requests than usual. She said that, after calculating the expected proceeds and expenses from the fall meeting, ANPS would still have around $18,000 in the bank. There was a question about why there was no donation to the Halberg Ecology Camp. The summer Camp was uncertain for a while and the donation was not requested. Leslie then presented the budget for 2024. The budget was balanced at approximately $13,000. Sarah Geurtz moved to accept the 2024 Budget. Susan Hardin seconded the motion. The motion passed.

Joe Ledvina asked the Membership to consider a grant application made by All Saints Lutheran School in Jonesboro. The application was for $1,700 and included hardscaping. The Board recommended that Joe asked the requestor if they could get support from another source for the hardscaping and the school has agreed to provide it. The revised request was for $1,005. Joe provided the Membership with the final request which included the cost of the native plants. Members then discussed the cost of the plants on the list. Sheryl Willis moved to award the All Saints Lutheran School $1,000 and said that she would donate an additional $20. Diana Soteropoulos seconded. The motion passed with one "no" vote. Sheryl gave her $20 donation to the Treasurer, Leslie Patrick.

Joe Ledvina reported that Mike Burns was leaving the Board after 12 years of exceptional service. Virginia McDaniel spoke and thanked Mike, who could be counted on to distill lots of complex issues; his advice and counsel were invaluable. He did an exceptional job. Joe also reported that Margaret Lincourt was leaving the Board and he thanked her for her excellent contributions as Secretary for the past six years.

Joe Ledvina asked Greg Rajsky and Andrew Ruegsegger to tell the Membership about their background and interests. Joe said that the Board recommended the following slate of officers for election:

Nate Weston, Social Media Officer
Joe Ledvina, Publisher
Greg Rajsky, Secretary
Andrew Ruegsegger, Vice President

Sarah Geurtz moved to elect the slate of officers as presented. Peggy Burns seconded. The motion passed unanimously.

Joe Ledvina asked the Board to consider a change to the bylaws, (Section IV, 2, a) and explained the rationale for the change. The change would require the Board to meet in the month prior to the business meeting, and not the weekend of the business meeting. The change read: "… during the month preceding each Spring and Fall meeting." Sheryl Willis moved to accept the bylaws change as presented. Susan Hardin seconded. The motion passed unanimously.

Joe Ledvina said that River Valley Horticulture was having an open house for vendors and organizations October 21, 2023 and had invited ANPS to participate. There was a question about whether we could sell merchandise and Joe will look into that. He asked for a volunteer to help him with the event.

The ANPS Spring Meeting will be held May 17-19, 2024 in Mountain View, Arkansas.

Jennifer Ogle, on behalf of the Board, thanked Joe Ledvina for his outstanding service as President.

ANPS merchandise (t-shirts, hats, etc.) may be purchased at: https://www.bonfire.com/results/arkansas+native+plant+society

There being no further business, the meeting adjourned at 6:35 PM.

Respectfully submitted,

Margaret Lincourt, Secretary

# Spring 2024 ANPS & OCANPS Field Trips

**Fayetteville's Westside Gems**
**Saturday, April 13 at 10:00 a.m.**
**Fayetteville's Westside Gems**
**Meet: 1837 North Rupple Road, Fayetteville; home of Ginny Masullo and Steve Smith**

The west side of Fayetteville has several places we can see spring interests. Woolsey Prairie would be top on the list. It is a prairie restoration success story. It was burned in January and by April 13th it should be green and growing. Also near Woolsey Prairie is Wilson Springs. There is a short creekside walk in from the west side that some folks don't know about. Right now it is closed for restoration but hopefully will be open in April. Across from the west side of Wilson Springs is a new city park, which is not completely developed right now. It's an old golf course and it's called Underwood Park. Depending upon the conditions and what we can see we might go to one or all of these places. We will meet at Ginny and Steve's home which is central to all the above places and there is plenty of parking. We can decide where we will walk depending on conditions. Steve Smith and Ginny Masullo are leaders/greeters. We will all share our knowledge of plant identification and learn from each other.

**Logan Springs Preserve**
**Saturday, April 27 at 10:00 a.m.**
**Meet: Logan Springs Preserve, 15300 Osage Hill Rd, Siloam Springs, AR 72761**

Logan Springs Preserve is located between Tontitown and Siloam Springs and sits adjacent to the Logan Cave National Wildlife Refuge. Hiking at Logan Springs is a botanical treat and includes diverse habitats such as restored prairie habitat, wetland marsh habitats, as well as an Oxbow Lake. Chas McCoy from the Nature Conservancy and Laurie Scott will co-lead a OCANPS hike at the Logan Springs property, see up close its unique features and hear from Chas as he talks about the refuge, plants of botanical interest, rare habitat and plants. In a labyrinth-like experience, navigate the twist and turns on the levee system that surrounds the old spring-fed commercial minnow ponds and Oxbow Lake. The levees are level, easy and offer a neat view of nature as we explore Logan Springs! Please wear durable shoes, and bring a hat, sunscreen, your choice of insect repellant, and a snack or light lunch (and a picnic blanket) for an 'Ol fashioned picnic lunch beside the pond, or near the Oxbow lake weather permitting. There is a parking lot at the entrance to the preserve that will hold several vehicles, but please carpool as much as possible to help save space, gas and our environment!

**Little Fir Glades**
**Friday, May 3 at 10 a.m.**
**Meet: Caddo-Womble Ranger District Office; 1523 Hwy 270E Mt. Ida, AR 71957 (34.54246, -93.61264)**

Join Jennifer Ogle of the University of Arkansas Herbarium and Virginia McDaniel of the Southern Research Station for a tour of a Ouachita National Forest shale glade restoration project. Shale glades are a rare plant community in Arkansas and house a host of diverse and endemic species. The area was burned this winter so the display of flowers should be incredible.
Level of Difficulty: Moderate to difficult; unpaved old road and the then walking cross-country through the glade and over occasional downed cedar trees.

Bring a lunch, water, sturdy shoes and tick repellent.

***Flower display on the Little Fir glades in on the Ouachita National Forest. Photo by Virginia McDaniel.***

**Lincoln Lake**
**Saturday, June 15 at 9:30 a.m. to 12:00 p.m.**
**Meet: Lincoln Lake, Co Rd 669, Lincoln, AR 72744 (35.998194, -94.427283)**

Join Jennifer Ogle of the University of Arkansas Herbarium and Marson Nance of the Northwest Arkansas Land Trust for a tour of Lincoln Lake, one of NWALT's newest conservation easements. We will visit plant communities of dry to dry-mesic Ozark forests, sandstone bluffs, and a glade with a sweeping view of the lake.
Directions: From Hwy 62 in Lincoln, turn north on N. West Ave. and continue for 3.5 miles, then turn right into the parking lot for Lincoln Lake. Park in the gravel lot before the low water bridge.
Level of Difficulty: Moderate to difficult; the unpaved, rocky trail is steep in places and close to the edges of high bluffs.

# ANPS Spring Meeting

## May 17-19, 2024 in Mountain View, Arkansas

Everybody is welcome to attend! Meeting registration is only $10 with no pre-registration required. Registration will begin at 5:00 PM on Friday, May 17, 2024. The meeting events wrap up on May 19 around noon.

**Meeting Location:**
**The Center @ Mountain View**
116 W Main St, Mountain View, AR 72560
Google maps link: https://maps.app.goo.gl/C4RAShcWva73qqdw9
Facebook page: https://www.facebook.com/thecenteratmountainview/about

If you google this venue's name, don't get confused if you find "Stone County Community Center" with the same address. In late January 2024 it was sold and the name changed to "The Center @ Mountain View".

**Lodging:**
**Pinewood Cabins**
103 W Washington St
Mountain View, AR 72560
Phone: (870) 269-5900
Website: https://pinewoodcabins.net

38 rooms (a mixture of sizes) have been reserved at a price range of $125-165 before taxes. They offer a $10 discount for active military and veterans but no discount for early booking. Our block of cabins/suites will be held for ANPS until May 12th. Be sure to mention that you are with the Arkansas Native Plant Society when making your reservation. Parking is available near each unit. Breakfast is not included because each cabin/suite includes a kitchenette. Individuals are responsible for their own room and tax. Cancelations must be made 4 days prior to arrival. The rooms must be booked on the phone. View the "Pinewood Cabins on the Square" map to know which rooms you are booking when you call them. You can view a higher resolution version of the map on their website.

There are various other cabins available to stay in during the meeting but you'll have to check online for those, as they can't be booked in blocks of rooms and so are not reserved for ANPS.

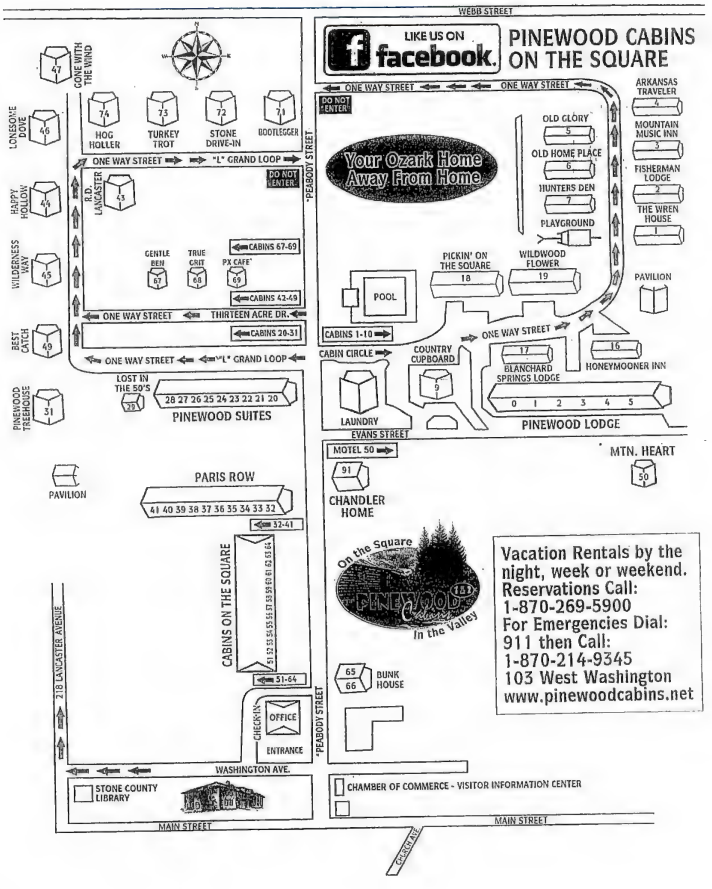
**Dining Options:** We will have a potluck meal Friday and Saturday evenings. Bring a dish or just come, eat, socialize, and learn! There are also some dining options (fast food and others) in the Mountain View area near Pinewood Cabins.

**Field trips:** Field trips to local areas of top botanical interest will be scheduled for Saturday 8:30 AM - 5:00 PM and Sunday 8:30 AM—12:00 PM.

**Auction:** Don't forget to bring Arkansas native plants and other items to enter into the silent auction! Winners will be announced Saturday evening.

Our field trips will offer something for everybody – slow and easy walks and more vigorous hikes. You must sign up for field trips on Friday evening to allow for adequate logistical planning.

For complete and up-to-date details, go to www.anps.org or contact Sarah Geurtz at sgeurtz.anps@gmail.com; (479) 381-2037.



# OCANPS News

*From the Spring 2024 Ozark Chapter ANPS Newsletter, written by Burnetta Hinterthuer:*

I hope that all of you have been well and hardy and able to enjoy the unusually mild winter this year. I keep expecting to get hit by a hard freeze before too long. So far, I have been wrong.

It has been challenging in ways I could not imagine so far this year, but the good news is that OCANPS nominated last year's slate of officers – who readily accepted. Sue Hubbard is President, Sandy, Tedder Vice President, Deb Bartholomew is Treasurer, with Janice LaBrie as Historian/Photographer, and Steve Smith as Auctioneer. We held our auction and are once making donations to Audubon Ecology Camp and Ozark Natural Science Center. Remember that the Spring Annual Meeting of the state organization Arkansas Native Plant Society will be held in Mountain View, Arkansas, this May 17-19th. More details can be found [on page 14 or www.anps.org]. We hope to see you there. Stone County is one of the richest botanical areas in Arkansas. I will be happy to send out a reminder as it gets closer to the time, with more details.

[On page 13] you will find a listing of hikes planned for the spring. Thanks to Sue Hubbard for helping plan these and to those who have agreed to show us some new areas and new plants. Have a happy spring.

***Top: Ginny Masullo, Kent Bonar, and Deb Bartholomew discussing the fall environment.***

***Above: David Geneson, Janice LaBrie, and Jim Dudley at Ozark Campground.***

***Left: Group photo at Ozark Campground in Pruitt during the Harmony Mountain Retreat, November 2023.***

***Photos by Burnetta Hinterthuer.***

# In Memoriam

**HAROLD "GENE" FORD**

*Longtime ANPS member and an original OCANPS member, Gene Ford, died in February. Burnetta Hinterthuer wrote a lovely tribute to him in the latest OCANPS newsletter, which we are reprinting here.*

Gene was such a great friend to everyone throughout the years, on hikes and at Harmony Retreat which we have enjoyed for the past seventeen years. He was always our hero transporting Mary Ann and Pine Ridge Gardens plants for the auction. But, he was interested in plants and people and we enjoyed many conversations over the years. We will certainly miss Gene but are so glad we have had those years in the woods, on the glades, and riverbanks looking for native plants. We wish Mary Ann peace, comfort, and joy at this time.

- Burnetta Hinterthuer

OBITUARY: Harold "Gene" Ford, 92, of London, Arkansas, died Sunday, February 11, 2024, at his home. The son of James and Wanda Pearl (Montgomery) Ford, he was born January 25, 1932, in Rogers, Arkansas. He was preceded in death by his parents and a brother, James Ford. His survivors include his partner of 40 years, Mary Ann King of London; a son, Larry Ford (Veronica) of Bella Vista, Arkansas; two daughters: Cathy Thompson of Bentonville, Arkansas; and Debra Fricks (Jeff) of Sherwood, Arkansas; seven grandchildren & 11 great-grandchildren.

Gene loved his work and spent many hours helping individuals and families find their dream home as an agent and broker in the real estate business, serving also on the Board of Realtors. Investing in his community was an important value to Gene, as he was active in Rotary International. Gene's faith was also important to him as he worshiped with his faith family at All Saints Episcopal Church in Russellville. In his leisure time, he enjoyed hiking, fishing, and spending time in the great outdoors, especially working on his tractor around his land.

The family is planning a memorial service at a later date at All Saints Episcopal Church. In lieu of flowers, the family invites memorial donations to: All Saints Episcopal Church, 501 South Phoenix Ave., Russellville, AR 72801, or The Nature Conservancy, 601 N. University Avenue, Little Rock, AR 72205.

**SHARON LUVOIS SHUGART**

OBITUARY: Sharon Luvois Shugart, age 76, of Pearcy, passed away on December 16, 2023, in Hot Springs, Arkansas, due to complications from Parkinson's Disease. She was born on July 22, 1947, at The Fincher Clinic in El Dorado, Arkansas. Sharon was a compassionate individual who brought smiles to the faces of many. She had a deep love for nature and animals, adopting and caring for scores of dogs and cats throughout her life. She took joy in keeping the birdfeeders in her yard well-stocked and would even stop on highway shoulders to help box turtles safely cross. Sharon was a kind soul who happily shared her property with wildlife, welcoming species from tarantulas to chipmunks. She fondly remembered floating the Caddo River with family in her youth, and was a lifetime member of the Arkansas Native Plant Society.

Sharon is survived by her loving husband, Mark Blaeuer of Pearcy, her brother Dr. Herman Henry "Hank" Shugart, Jr. (Ramona) of Charlottesville, Virginia, her niece Dr. Erika Shugart of Rockville, Maryland, and her niece Stephanie Bell of Charlottesville, Virginia; her niece Lisa Truelove (Stephen) of Ashland, Oregon, her nephew Kurt Blaeuer of Buffalo, New York, her nephew Karl Blaeuer

(Rose) of Oregon City, Oregon, her niece Carma Smith (Marc) of O'Fallon, Illinois, and her nephew Craig Frutiger of O'Fallon, Illinois. Surviving also are four great nephews, two great nieces, and a host of other relatives, as well as seven dogs and four cats. Surviving second cousins are Alfred Joseph Marti, Jr. of Hot Springs, Dr. James B. Atkinson III of Nashville, Tennessee, Anne Atkinson Moore of Wilmington, Delaware, Scott Edmund Atkinson of Tuscaloosa, Alabama, Mark Howell Inman of Bentonville, Sara Margaret Hunt of Carlisle, Dr. Samuel M. Strong of Little Rock, Richard Edward Davidson, Jr. of Gurdon, James Cooper Davidson of Gurdon, Cheryl Reames of El Dorado, Steve Shugart of Alvin, Texas, Marsha Taylor of League City, Texas, Mark Bridges of Katy, Texas, Traci Bridges of Dallas, Texas, Fred Harry Morecraft, Jr. of Pearland, Texas, Mary Murdock of White Hall, Betty Ray of White Hall, and Joan Wessels of White Hall.

She was preceded in death by her father Herman Henry "Shug" Shugart, Sr., her mother Kathryn Luvois (Rich) Shugart, her grandparents, aunts, uncles, first cousins, and many others, including her mother-in-law Hazel Marie (Pence) Blaeuer, brother-in-law Dr. David Blaeuer, and sister-in-law Linda (Blaeuer) Frutiger.

The family appreciates the efforts of her caretakers during the past two and a half years, notably the staff at Lakewood Therapy and Living Center, as well as the employees of Dierksen Hospice.

Sharon attended El Dorado High School, graduating in 1965. She furthered her education at Ouachita Baptist University, earning a B.A. in English in 1969, and later obtained an M.A. in anthropology from the University of Arkansas in 1990. Her thesis was A Socioeconomic Analysis of a Small Plantation in Dallas County, Arkansas, 1844-1868.

In 1992, Sharon began her career as a museum specialist for the National Park Service at Hot Springs National Park. During her tenure, which extended through 2009, she curated a large collection, designed exhibits, wrote informative text, created intricate color graphics on the computer, conducted valuable research, and assisted other researchers. Sharon's dedication and expertise were recognized in 1996 when she was awarded the Thomas Jefferson Prize by the Society for History in the Federal Government for two of her exceptional reference aids at the national park. One, a chronology of park events, eventually became a popular book. Prior to her work there, Sharon found success in a variety of other professional endeavors. She served as an assistant editor at the Arkansas Archeological Survey's publications department in Fayetteville, wrote and distributed a newsletter for Sierra Estates Mobile Home Park in Fayetteville, performed outreach for the Volunteer Bureau in Glossop, Derbyshire, U.K., worked as a copywriter and catalog coordinator for the C.V. Mosby company in St. Louis, was employed as an electronics assembler at Wescor, Inc. in Logan, Utah, and taught English in the St. Clair, Missouri, school district. Her adventurous spirit also found her living, at various times, in Sheridan, Arkansas; Coralville, Iowa; Webster Groves, Missouri; North Little Rock, Arkansas; and a log cabin north of Swain, Arkansas, in the Ozark National Forest.

In her free time, Sharon pursued multiple interests. She enjoyed listening to music of diverse styles, singing, playing the piano and guitar, and once composed a beautiful setting of Dylan Thomas's poem "Fern Hill." Sharon was an avid reader, with Jane Austen and Virginia Woolf being her favorite authors, and she loved to cook for family and friends. As a volunteer with the Garland County Historical Society, she received several awards from the Arkansas Historical Association for articles she researched and wrote for the Society's annual publication, The Record. These articles explored numerous aspects of the national park. She also turned her skills in research and writing to the study of her own family history.

In lieu of flowers, contributions may be made to the Humane Society of Garland County or the Garland County Historical Society.

Sharon will be dearly missed by all those who had the privilege of knowing her.

# Spring Meeting Highlights

# 2024 Spring Treasurer's Report

| 2024 Spring Treasurer's Report | | | | | | Proposed 2025 Budget |
|---|---|---|---|---|---|---|
| | | | January 1 - March 4, 2024 | | | |
| | | | Start 2024 | → | $18,176.40 | |
| | 2023 Actual | 2024 Approved Budget | 2024 Actual | | | |
| INCOME | | | | | | |
| Membership Dues | $4,253.30 | $6,500.00 | $975.00 | | | $4,300.00 |
| Meeting Registration | $1,630.11 | $1,600.00 | $0.00 | | | $1,600.00 |
| Plant/Silent Auction | $703.58 | $1,100.00 | $0.00 | | | $700.00 |
| T-Shirt, Hat, Book Sales | $1,912.19 | $1,800.00 | $0.00 | | | $1,900.00 |
| Contributions | $1,252.00 | $2,000.00 | $0.00 | | | $1,300.00 |
| TOTAL | $9,751.18 | $13,000.00 | $975.00 | → | **$975.00** | $9,800.00 |
| EXPENDITURES | | | | | | |
| ANPS.Org (website domain/wordpress) | -$189.96 | -$190.00 | $0.00 | | | -$190.00 |
| Claytonia (Print & Distribute 2 Issues) | -$2,334.06 | -$2,000.00 | $0.00 | | | -$2,400.00 |
| Directory (Print and Distribute) | -$1,432.57 | -$1,450.00 | $0.00 | | | -$1,450.00 |
| Memorial Awards/Scholarships | -$12,000.00 | -$6,000.00 | $0.00 | | | -$6,000.00 |
| Grants/Support to Public Gardens | $0.00 | -$1,000.00 | $0.00 | | | -$1,000.00 |
| Meeting expenses (space, copies, speaker,etc.) | -$464.41 | -$1,000.00 | $0.00 | | | -$1,000.00 |
| SWS: AR Eco Tour | -$250.00 | $0.00 | $0.00 | | | $0.00 |
| Ecology Camp | $0.00 | $0.00 | $0.00 | | | $0.00 |
| Bulk Mail | -$290.00 | -$290.00 | $0.00 | | | -$320.00 |
| PayPal/Square fees | -$35.43 | -$100.00 | -$3.16 | | | -$50.00 |
| Zoom (webinar series) | -$162.83 | -$163.00 | $0.00 | | | -$163.00 |
| Supplies/postage/fees/misc | -$215.17 | -$100.00 | $0.00 | | | -$200.00 |
| T-shirts/Hats/Books Purchases | $1,139.25 | -$800.00 | $0.00 | | | -$500.00 |
| Tabling (ASB, MG) | $0.00 | $0.00 | $0.00 | | | $0.00 |
| TOTAL | -$16,235.18 | -$13,093.00 | -$3.16 | → | **-$3.16** | -$13,273.00 |
| | | **Total as of March 1, 2024** | | → | **$19,148.24** | |
| Respectfully submitted by Leslie Patrick, Treasurer | | | | | | |

## Don’t forget about the ANPS Monthly Webinar Series

If you would like to receive webinar announcements and Zoom links, contact Eric Fuselier to be added to the email list (anps.programs@gmail.com). Watch past webinars at youtube.com/channel/UCEIlEFuRaz0HbIgXxwRIHvw.

# President's Message

Spring has sprung! And boy did it spring early this year. After an unusually warm winter, we saw the eastern redbud trees bloom an entire month early, at least here in the northern part of the state. We'll see what the rest of the spring brings us, and whether the timing of any other blooms will be out of sync.

Thinking of how warm the past few months have been, I'm reminded of the first ANPS event I ever attended. It was a hike at Devil's Eyebrow Natural Area led by Theo Witsell in May 2013, the day after the natural area was opened to the public. The weather that spring was in stark contrast to what we've seen so far this year. Most memorable was that the day before the hike, we had an unusually late snow that accumulated up to an inch in depth before quickly melting. It's amazing to see how volatile and unpredictable our climate is becoming, and it'll be interesting to see how the native plants of Arkansas are able to adapt.

But there's at least one thing that is still predictable: the annual rhythm of ANPS biannual membership meetings. And this year we have an exciting Spring meeting planned for you in Mountain View. Sarah Geurtz has been working very hard to plan this meeting, and I can tell you that it is shaping up to be a very memorable one filled with some great hikes and speakers. So mark your calendars folks! We look forward to seeing you in May!

– Eric Fuselier, ANPS President and Programs Officer

## Arkansas Native Plant Society Membership Application

**Membership Categories**

_____ $10 Student
_____ $15 Individual
_____ $20 Supporting
_____ $25 Family
_____ $30 Contributing
_____ $150 Lifetime (age 55+)
_____ $300 Lifetime (under age 55)

_____ New Member
_____ Renewal
_____ Address Change

_____ Opt out of receiving paper *Claytonia*

**Name(s)** _____

**Address** _____

**City** _____ **State** _____ **Zip** _____

**Phone** _____ **Email**_____

Mail this completed form with a check made payable to the Arkansas Native Plant Society to:

Leslie Patrick, Treasurer
15 Pinecrest Court
Conway, Arkansas 72032

**JOIN OR RENEW ONLINE INSTEAD! Details at anps.org/join.**

Arkansas Native Plant Society ANPS

# Claytonia

Virginia McDaniel | Editor
virginiamcd31@yahoo.com

## Please check your mailing label!

The calendar year is the membership year. If your mailing label says "23" or earlier it's time to renew. Life members have an "LF" on their label.

To renew your membership, fill out the application for membership on page 20 and mail it to the address on the form.
Or renew online at **anps.org/join**.

### Random plant tidbits from Wildflower Folklore

by Laura C. Martin

[*The following are mostly direct quotes that I found entertaining. Any medical advice is for entertainment and should NOT be used without consulting a medical professional.*]

**Black-eyed Susan (*Rudbeckia hirta*):** Although it depends on a variety of insects for pollination it has developed a method of keeping away unwanted pests, like ants. The stems are covered with tiny barbs which make it impossible, or at least very uncomfortable, for ants to crawl up.

**Bellwort (*Uvularia perfoliata*):** It was once thought to be an effective cure for throat problems, according to the doctrine of signatures. The earliest herbalists thought the blossoms of the bellwort looked like the uvula, that funny-looking pink thing that hangs down from the soft palate in the back of the mouth.

**Buttercup (*Ranunculus* sp.):** The tiny, innocent buttercup at some point acquired the reputation of causing lunacy and was called the "crazy weed" by many country folk. To hold the flower next to your own neck on a night when the moon is full, or simply to smell the flower, were said to drive you insane. Although there has never been an official report as to anyone's actually losing his [or her] mind because of the buttercup, many species are poisonous and will severely irritate the skin. …. On species of the buttercup was even used in poison arrows.

**Whorled loosestrife (*Lysimachia quadrifolia*):** Both the common and the generic names of this plant refer to the supposed power of the plant to soothe animals or "loose them from their strife." Legend tells us that King Lysimachus of Sicily was walking through a field when a bull began to chase him. The good king grabbed this plant and waved it in front of the bull, calming him and loosing him from his strife. It was thought that tying a branch of the plant to the yoke of oxen would make them easier to handle. It was also found that the plant helped to repel gnats and other irritating insects, and perhaps this explains why the animals were easier to handle with loosestrife close by.

## 2024 ANPS OFFICERS

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# CLAYTONIA

Newsletter of the Arkansas Native Plant Society

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## Dr. Dwight Moore's Botanical Legacy

by Jennifer Ogle, with contributions from Gary Tucker

This month marks the 100th anniversary of Dr. Dwight Moore's arrival in Arkansas. ANPS members are familiar with the Dwight Munson Moore Award, which is given on the occasion of outstanding achievement in either research or publication on Arkansas botany. But what else do we know about him? Given that Moore died in 1985 at the age of 93, I feel it's safe to say that most of us did not know him personally. I would venture to add that many readers know little of his long and prolific career as a university professor, field botanist, herbarium curator, and author, or of the role he played in promoting a love of native plants among the public.

***Dr. Moore sitting for a promotional photo in the University of Arkansas Herbarium (UARK). Photo: Special Collections, University of Arkansas Libraries, Fayetteville.***

But thankfully, a few extant members of ANPS did know Moore personally. One of these is another Arkansas botanist, Dr. Gary Tucker, who, as a graduate student in the 1970s and later as a professor, was friends with Moore and several other botanists who were active during the early to mid-20th century. I am grateful to Tucker, who I think of as Arkansas' Botanical Genealogist, for conducting research and telling stories about our botanical family tree, including for this article. Much of what we know about Moore is thanks to Tucker and his friend and collaborator, the late Ms. Gwen Barber (a charter ANPS board member), and also thanks to Moore himself. He was a meticulous record keeper who donated his copious correspondence, notes, and sketches to Special Collections at the University of Arkansas Libraries in 1975. What follows is taken, sometimes word for word, from Tucker's detailed research and a few other sources, such as early ANPS newsletters and my notes from the Dwight Moore Papers in Special Collections. Full references are listed at the end of the article.

*(Continued on next page)*

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Dwight Munson Moore (1891–1985), an Ohio native and holder of a PhD in plant physiology from Ohio State University, came to the University of Arkansas as a faculty member in 1924. Although trained as a plant physiologist, he began collecting botanical specimens for the university herbarium soon after arriving in Arkansas. He was especially interested in woody flora, and his collections include many rare or otherwise unusual members of the state's flora. Moore published a number of papers on Arkansas's flora, including checklists of the woody plants (1941) and grasses (1961) of the state. After retiring from the University of Arkansas in 1957, Moore taught forestry at the Arkansas Agricultural and Mechanical College at Monticello (now the University of Arkansas at Monticello). During 1961–1967, he was a Biology Department chairman and botany teacher at Arkansas Polytechnic College in Russellville (now Arkansas Tech University). He worked at establishing the South Arkansas Arboretum at El Dorado during 1967–1970.[1]

***Dr. Moore, to the left of two nuns and operating a pole pruner, teaching a summer school class at the University of Arkansas. Photo: Special Collections, University of Arkansas Libraries, Fayetteville.***

During his long tenure at the U of A, Fayetteville, he had several noteworthy absences from the campus. During the summer of 1934 he served as Professor of Botany with the Omnibus University, one of the first attempts in education with the so-called "open campus." The car used for the trip, a 1925 seven-passenger Packard with about 148,000 miles on it, was nicknamed Betsy. The group, with Moore in command, left Little Rock on 11 June and arrived in Chicago on 31 July; between those dates they had studied just about everything that came in their path as they moved from Little Rock to Memphis, Vicksburg, New Orleans, Pensacola, Atlanta, Knoxville, Washington D.C., Philadelphia, New York, on into Canada, back to Detroit, and finally to Chicago and back to Fayetteville. The students studied everything from botany to geology, history, economics, industry, etc. It must have been a grand experience as the students and Dr. Moore visited with personalities ranging from George Washington Carver at Tuskegee Institute to Jane Addams at Hull House in Chicago.[2]

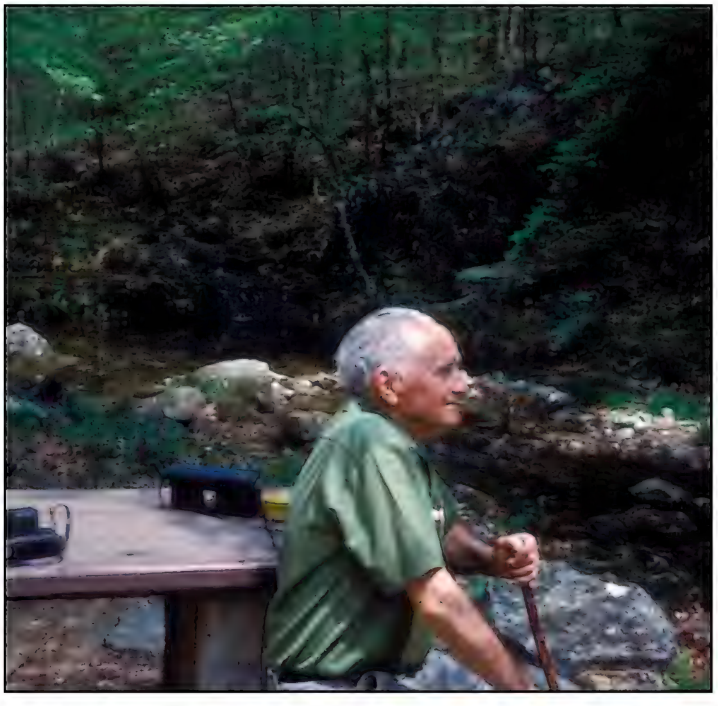
In 1944, as his contribution toward the war effort, Moore was regional supervisor of the Milkweed Floss Division, War Hemp Industries. That group was involved with the collection of floss from milkweed seeds (genus *Asclepias*), useful as a substitute for kapok. Normal supplies of kapok, used by the Navy in life jackets and other flotation devices, were controlled by the Japanese and substitutes were vital to the American troops. To Dr. Moore's chagrin the war ended before the floss could be removed from the warehouses, but he delighted in telling how he had organized the collection effort, utilizing school children throughout the Midwest as collectors of the milkweed floss.[2]

Moore discovered many Arkansas state record native plants during his career, and deposited thousands of specimens at UARK and other herbaria. He also discovered and described *Delphinium newtonianum* (Moore's delphinium), an Arkansas endemic species.[1] For more on that discovery, please see the delightful article written by historian, Arkansas Master Naturalist, and UARK volunteer Susan Young on p. 20 of this newsletter.

Moore understood the importance of bringing botany to the public. He was very active in the garden club movement, gave talks on native plants statewide, and wrote articles that appeared in popular magazines. He revised *Trees of Arkansas* in 1950, a book that made his name familiar to schoolchildren throughout the state[1] and which was used by so many of us for more than five decades, until the book saw another major revision by Dr. Eric Sundell.

Privately, Moore confessed he was not pleased with his

revision of *Trees of Arkansas*, responding to Maude Coulter of Ogden, who had written to congratulate him on the book, that "with the money available that was the best we could do." He continued, "I hope before too long time has elapsed to have something that is complete on all of the woody plants, including trees, shrubs, and woody vines of Arkansas." Replying to Coulter's inquiry about whether a wildflower book would be next, he wrote, "Off and on I have been working on that for a quarter of a century or more, but anything of the kind to be adequate demands a great deal of attention and enormous field work. The latter is one thing that I must increase before I feel that my work is complete enough to publish a satisfactory book on wildflowers of Arkansas. However, I am becoming more hopeful about it, and perhaps before too long has passed we may get it into print."[3] Unfortunately, he was not able to find time to write books on the complete woody flora or the wildflowers of Arkansas due to his teaching responsibilities. Had he been able to devote the necessary time, I am sure the result would have been a quality botanical resource for Arkansas equal in scope, depth, and heft to Julian Steyermark's 1961 tome, *Flora of Missouri*. But for Moore, teaching and herbarium curation came first, and he did those things very well. During his career, Moore taught botany to hundreds of students and provided botanical training to many who either became professional botanists or served at state and federal agencies.[2] He left the UARK Herbarium in excellent condition, with tens of thousands of specimens that are still used today for research and teaching.



***Dr. Moore at Crystal Recreation Area. Photo: Arkansas Natural Heritage Commission.***

In a newspaper piece[4] reporting on a 1979 celebration at Tucker's home for Moore's 88th birthday, the senior botanist continued to promote nature and native plants to the public. He told the reporter that he and his wife spent their days revisiting favorite botanical sites in the "wilds of Arkansas" but noted that "such places are growing scarce" due to "industrial growth," raising an early alarm about the loss of natural areas in the region.

Though long retired by the time the ANPS formed in 1980, he and his second wife Clementine were involved with the society (she served on the board in 1986[5]). Ever the botanical educator, he led a field trip during the Fall 1981 meeting in Hot Springs, titled *Trees and More with Dr. Dwight Moore*.[6]

Today, a full century after his arrival in Arkansas, Moore would have been proud to see what ANPS has become and encouraged by the movement to promote and use native plants widely in private gardens, public landscapes, and habitat restoration. His legacy is strong.

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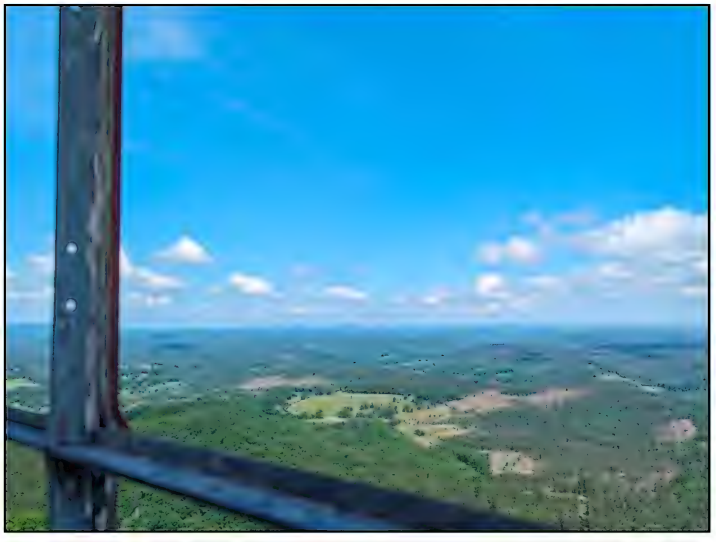
# Sugarloaf Mountain

by Sarah Geurtz

***Fire Tower on top of Sugarloaf Mountain. Photo by Sarah Geurtz.***

Past family memories were what tipped the scales in my head to decide on attending the Sugarloaf Mountain hike at the spring 2024 meeting. My late grandfather, William Wolford, used to live in Batesville and had an airplane. I grew up with him pointing out "Sugarloaf Mountain" on every summer trip to Mountain View on which he'd take me. He'd point and tell me that he used that mountain to direct him as he flew. That must have been in the 40s or 50s. As time went on, I decided that any mountain that looked like a loaf of bread was a "Sugarloaf Mountain" – that it wasn't really anything special. This hike turned out to be an educational hike for more than the plants. The rock outcrops on this



***View from the fire tower on top of Sugarloaf Mountain. Photo by Sarah Geurtz.***

mountain must make it very distinctive from the sky, as would the wonderful old CCC-era home, cistern, cellar, and fire tower (which we of course climbed), all located at the top.

The VIEW was close to the most amazing part of the hike. Wait - I mean the PLANTS were amazing! Well, they both were. I'm sure you understand. A portion of the mountain had been burned and the view off the mountain was stunning. It was the kind of view that can literally cause your breath to catch – and make you imagine yourself a hawk gliding through the air between the lush green of the bottom plane and the azure of the upper.

***Hairy lip fern (Myriopteris lanosa). Photo by Eric Hunt.***

For the plants that I found exciting (I *said* it wasn't just the view that was fantastic!) we were treated with seeing the tough little ferns purple cliff brake (*Pellaea atropurpurea*), blunt lobed cliff fern (*Woodsia obtusa*), ebony spleenwort (*Asplenium platyneuron*), and my first natively-spied hairy lip fern (*Myriopteris lanosa*). We think of ferns as being delicate but if in their ideal environment, they can be *tough.* Their fossil record goes back to the Devonian period (383–393 million years ago) and maybe even further back than that. It's a tough group of plants.

***Purple prairie clover (Dalea purpurea). Photo by Eric Hunt.***

And *then* the hike got very exciting – we found a native bumblebee community beneath a rock outcrop! They had tunnels of soil coming out of the ground there in the dry soil. It was like viewing a miniature version of Mesa Verde. I wasn't able to capture a photograph of the bees, unfortunately. Therefore, a simple "fascinating native bumblebee species" it will have to remain. The soil

***Ben Thesing likes the open, fire maintained structure on Sugarloaf Mountain that is managed by the US Forest Service. Photo by Sarah Geurtz.***

gets exceptionally dry in areas over the rocks on Sugarloaf – and Arkansas calamint (*Clinopodium arkansanum*), sensitive-briar (*Mimosa nuttallii*), and purple prairie clover (*Dalea purpurea*) were some of the species we were treated to see in bloom.

At every hike I attend at our meetings, I learn something new from our excellent hike leaders (Virginia McDaniel, Andrew Ruegsegger, Diana Soteropoulos, and Joe Ledvina for this hike) and the fantastic places we have available for hiking thanks to our state's natural areas. This hike did not disappoint. We saw a native *Echinacea*, but determination of its species was hotly discussed and never determined because its pollen wasn't observable yet. In order to explain the difference between the two species it could have been, here you go, dear reader – the differences between our state's three strappy-rayed *Echinacea* species (coneflowers), as explained in "Know Your Natives - Pale Purple Coneflower" by Sid Vogelpohl.

***While the purplish Echinaceas can be confusing, there is only one yellow purple coneflower, a.k.a. the paradoxical echinacea (Echinacea paradoxa), which we also saw on Sugarloaf Mountain. Photo by Eric Hunt.***

- There is the more common pale purple coneflower (*E. pallida*). It's pollen is **white**. This helps me remember – *pallida* translates to *pale* and white is as pale as you can get. I always thought *pallida* referred to the color of the ray flowers until this hike; now I know the truth.
- Sid's article goes on to explain that glade coneflower (*E. simulata*) has ligules that droop less and are usually deeper pink than those of pale purple coneflower, and the pollen is **yellow**.
- Then there's sanguine purple coneflower (*E. sanguinea*). It also has pale purple strappy rays but also shorter, wider leaves and stems and its involucral bracts tend to have purplish stalks and tips. Its pollen is **yellow**. Don't worry, it is known in Arkansas only in the sandhills of Miller County (southwestern corner of the state), so if you see yellow pollen on a strappy pale purple-rayed coneflower, it's likely glade coneflower.

***ANPS group in the fire tower on Sugarloaf Mountain. Photo by Sarah Geurtz.***

We were also treated to butterfly milkweed (*Asclepias tuberosa*) in bloom. Virginia showed the group how one of its ID features is that it does not have milky sap like the other species in that genus. Another interesting thing about this species (and a good way to remember its Latin name) is that it forms a large tuber (hence its species name of *tuberosa);* this is one of the ways it survives in harsh, dry environments.

In all, it was a lovely hike. I learned about the vegetation, the forest service's management practices (a recent burn), and the history of the site. I also learned, after the hike, that this mountain is still used by pilots due to its distinctive features from the sky. It's well worth visiting!

# Field Observations of *Dirca decipiens* - Ozark Leatherwood

by Stephen Dickey

Ozark leatherwood (*Dirca decipiens*) is a deciduous shrub that grows to a height of 6.5 to nearly 10 feet (2-3 meters). An early bloomer, its distinctive yellow flowers emerge in late March to early April,[1] before most of the surrounding plant community is ready to make their spring entrance (Center for Plant Conservation, 2024). The leaves eventually emerge from the same node as the bud, alternating along the very flexible stem.[2] *Dirca decipiens* closes out its year when the leaves turn a pleasant pastel yellow color, presenting an identifiable contrast with surrounding terrain and vegetation.[3]

Northwest Arkansas is one of the few locations that Ozark leatherwood calls home, and much remains to be discovered about its preferred habitat here in the Ozark Highlands. In a paper identifying *D. decipiens* as a new species, Floden et al. (2009) noted that it occupies a xeric limestone habitat, and that the three known non-contiguous locations were "all on northeast facing bluffs and slopes above rivers." The shrub's habitat description has expanded over time and was described in *Trees, Shrubs, and Woody Vines of Arkansas* as "calcareous bluffs, rocky stream banks, and steep dry to mesic forests and woodlands" (Ogle et al. 2020).

The following paragraphs present field observations that expand upon the rocky stream bank habitat and the plants presence in locations that experience intermittent high water flow rates, inundations, and associated soil saturation.

### *Dirca decipiens* is a rugged shrub!

The Ozark Leatherwood is able to survive and thrive in what could be called an intermittently hostile environment. Exploration of ephemeral streams and creeks revealed mostly shaded (dappled sun) populations of *D. decipiens* on banks, point bars, and mid-stream bars. The lean of the grasses and deposit of debris (large and small) indicated they experienced periodic heavy water flows and inundations. It was common to find parts of a plant damaged from apparent contact with waterborne debris.[4] Some trunks were found to be leaning downstream but still firmly anchored by thick and healthy root structures.[5]

### Elliptic Trunks?

In addition to leaning, some trunks had an elliptical shape with the major axis aligned with the apparent water flow.[6,7] Could this be an adaptation to reduce resistance and help prevent uprooting? More field work is necessary to determine the number of occurrences, measurements, locations, and alignments.

### Rhizomes!

At two separate locations, streamside erosion exposed rhizomes (stoloniferous rhizomes?), with new shrubs sprouting from nodes a short distance away from the parent plant.[8,9] While this may not add to the genetic diversity of the species, it certainly provides another option, and might even serve as a useful anchoring mechanism.

### A Special Relationship

*Dirca decipiens* appears to have a special relationship with streams and creeks, water drainage patterns, high flow rates, and periodic inundations. Maintaining this "rough-and-tumble" habitat will need to be part of the discussion regarding the species' preservation and conservation.

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***Photos (next page): numbered images correspond to superscript numbers in the text.***

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Photos By: S. Dickey

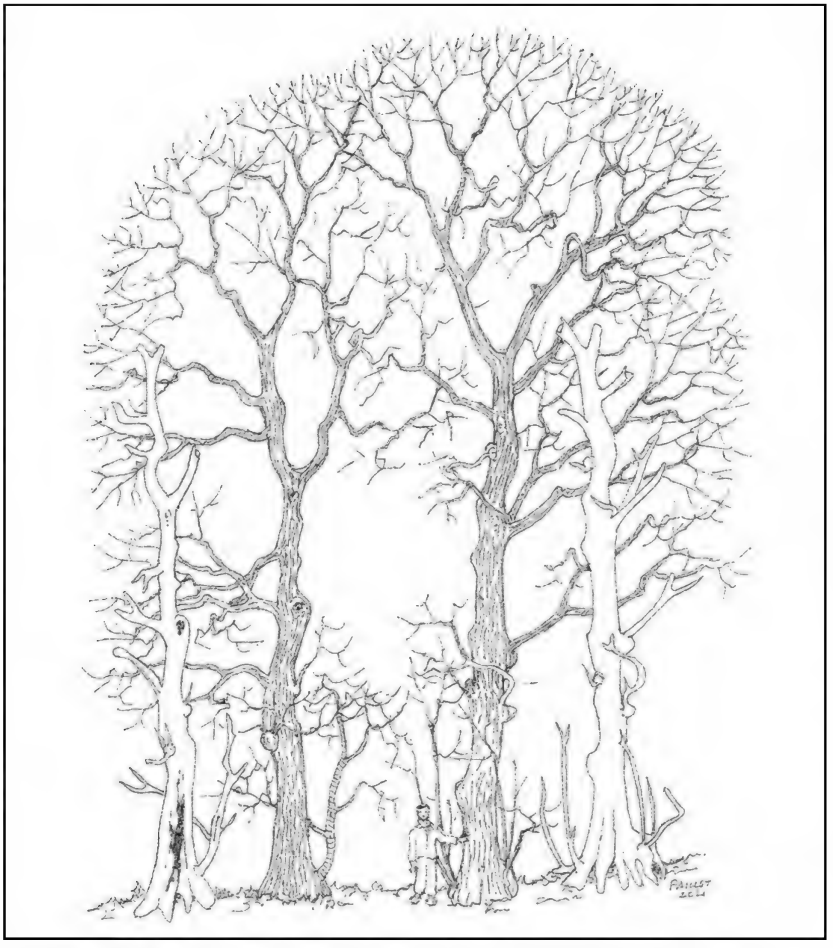
# Envisioning Old Growth Ozark Chinquapin

by Frederick Paillet

*As a retired adjunct faculty once working out of the tree ring lab at the University of Arkansas in Fayetteville, I have supervised students helping me with my investigation into the ecology of Ozark chinquapin - resulting in several technical publications.*

*As an amateur artist I have meanwhile worked to take the wealth of information we have from tree rings and forensic work to develop a vision of what the tree looked like in its prime, embedded in old growth forest. Although not worthy of a technical publication, I would like to share the results with our members who may be interested.*

That once beloved Ozark chinquapin (*Castanea ozarkensis*) was removed from our uplands by introduced chestnut blight decades ago, even if root sprouts remain today. Those sprouts are regularly pruned back by basal cankers providing the doubly unfortunate situation where susceptible individuals are not eliminated and generation of resistant individuals cannot be created by seed production from surviving trees.



***The attached figure shows the carefully documented remains of two large Ozark chinquapin hulks lying underneath obviously large black and mockernut hickories on a ridge in the Ozark National Forest. The diagrams of these remaining trunks have been fleshed out using the patterns available in the largest surviving specimens available. The figure pretty much speaks for itself, using my modest 6-foot self as a suitable scale.***

Even the taxonomy of the species is contested – is it a shrub-like variety of Allegheny chinquapin (*Castanea pumila*) or its own distinct species? My academic colleagues and students have worked for some time on the ecology of our tree and its relation to other *Castanea* species (see for example Paillet and Cerny, 2012 in Torrey Journal). The remains of blight-killed chinquapins can be seen in Northwest Arkansas, but often represent trees growing in disturbed situations in formerly grazed or logged forests. As an amateur artist experienced in reconstructing past environments, I searched for the best-preserved examples of former chinquapin trees in locations that resembled what must have been old-growth conditions on upland sites. My students and I used release dates on oaks adjacent to the remains of large chinquapins to identify 1957 as the date when blight arrived in Benton County.

The size of remaining trees on old-growth sites clearly shows our chinquapin was a forest dominant tree and not a shrub. I selected a pair of fallen trunks about 45 feet long as the basis for my illustration – the carefully measured planforms of the evidence superimposed on the figure. I used diagrams of the crown structure of the largest living survivors and fragments of dead trees with reasonably well-preserved branches propped against other trees to fill out the crowns of my illustration. Using the artist as a scale, this is the best representation of what our tree looked like in its prime that I know of.

Two specific points of interest to note: 1) our studies show that Ozark chinquapin in old growth situations had a single trunk rather than the multi-stemmed form often seen in disturbed situations; and 2) mature trees usually had small, suppressed sprout stems perched on the root collar.

# Welcome, New ANPS Members!

**New Members to ANPS since the spring issue of *Claytonia* (between 06 March 2024 and 10 August 2024)**

Anne C. Butcher (Kirby, AR)
Michael L. Carnahan, DVM (Stuttgart, AR)
Sandie Cloud (Mountain Home, AR)
Seth Fleming (Booneville, AR)
Stacy & John Fletcher (Little Rock, AR)
Janet & J.D. Gingerich (Conway, AR)
Denise Hilton (Searcy, AR)
Dylan Jacobs (De Soto, MO)
Rebecca James (Roland, AR)
Sarah Labuda (Little Rock, AR)
Summer Linn (Fayetteville, AR)
Brett J. Savary (Jonesboro, AR)
Wendy Shoffner (Little Rock, AR)
JoAnn Steele (Damascus, AR)
Steven Warmack (Little Rock, AR)

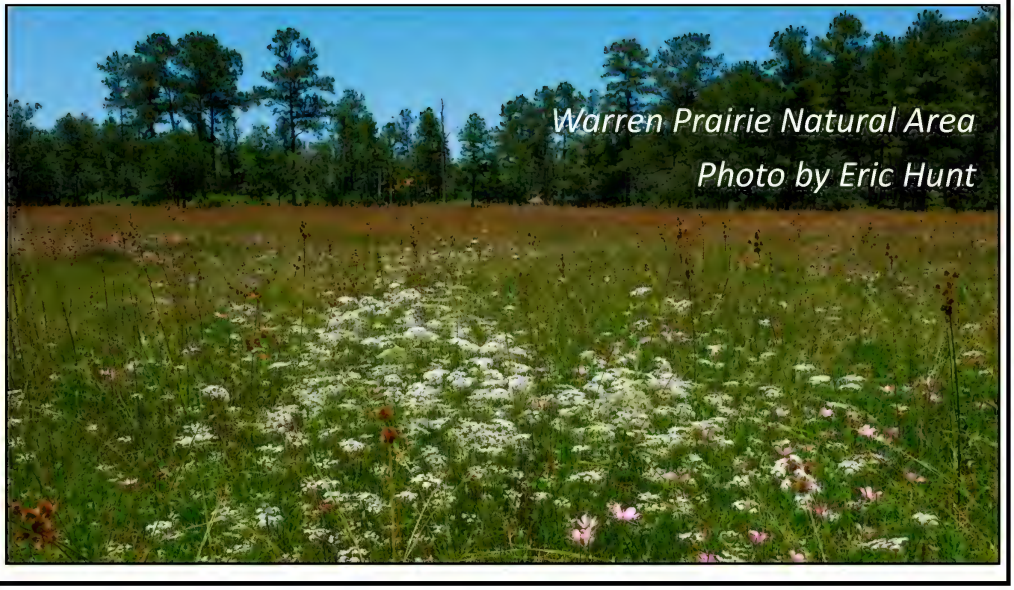
**New Life Members**

Jennie G. Cole (Little Rock, AR)
Marcia Erbland (Little Rock, AR)
Elizabeth (Liz) Harris (Farmington, AR)
Amy Hudson (Conway, AR)
Peggy Kilpatrick (Rogers, AR)
Steven Kortum (Hot Springs Village, AR)
Maribeth Latvis (Fayetteville, AR)
Lynn Michael (Claremore, OK)

***We are so happy to have you part of a wild group that randomly points at things. Photo by Virginia McDaniel.***

**SAVE THE DATE!**

SPRING 2025
MEETING
MAY 2 - 4
MONTICELLO, AR



# Floristic Quality Assessment: Measuring What is Natural

by Andrew Ruegsegger

Picture this. You're standing in a patch of long-abandoned cropland. Tall fescue (*Lolium arundinaceum*), invasive cheat grasses (*Bromus* spp.), and ankle-grabbing dewberries (*Rubus* spp.) surround you. You're not sure when the soil was originally plowed and you're not sure when it was left fallow, but you know that it has a ways to go before it resembles anything approaching the natural, stable grass-/woodland it once was.

But you want to know just how far it is from that place. Maybe you want to restore it, or maybe you're just curious. Whatever the case, you want to know how much this system has been destabilized. You begin to wonder how you might go about figuring this out. You could come up with a ratio of non-native invasives to natives, but that would be missing a lot that those early-successional, weedy natives could be telling you about the system's stability. Simply counting the number of plant species would also seem to miss the point. After all, invaded ecosystems can actually have more species than uninvaded ones, as the invasives often add to the preexisting species count.

So, you do some research. And you stumble across this thing called Floristic Quality Assessment that a Chicago botanist named Gerould S. Wilhelm came up with in the late 1970s. Different plant species, he recognized, indicate different degrees of natural quality and habitat stability. For example, Johnson grass (*Sorghum halepense*), which grows abundantly in your old field, will grow in very unstable, degraded, chaotic places. On the other hand, dotted gayfeather (*Liatris punctata* var. *mucronata*) will only grow in some of the most natural, intact woodlands and grasslands. To capture these differences, Wilhelm and his colleague Floyd Swink assigned values to each plant species growing within the Chicago Region, called a coefficient of conservatism (C-value, for short). They assigned C-values on a scale from 0-10, with 10 given to the species with the highest fidelity to intact, natural systems, and 0 assigned to the most ruderal species. Keep in mind, though, that high C-values shouldn't be conflated with rarity, especially on the state level, despite considerable overlap between rare species (especially those that are globally imperiled) and high C-values. For example, hardstem bulrush (*Schoenoplectus acutus* var. *acutus*) is a G5S1 species (G5 indicating the plant is se-

***Dotted gayfeather (Liatris punctata var. mucronata) has a C-value of 10 in Arkansas, indicating its fidelity to high quality habitats. Photo by Theo Witsell.***

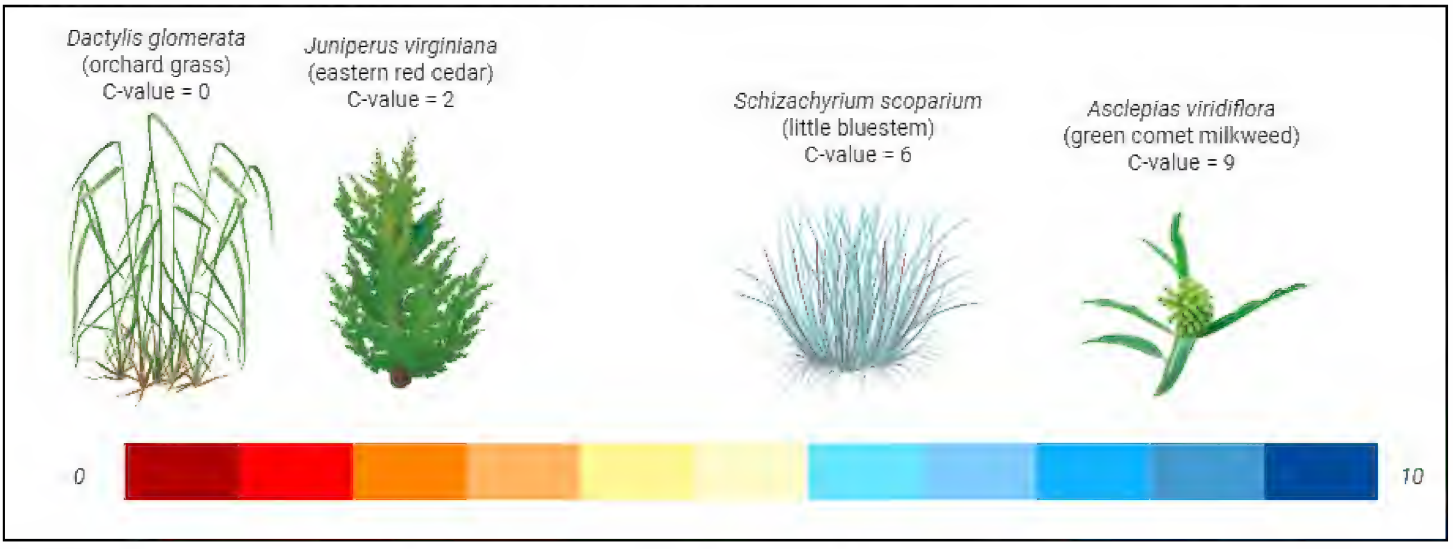



***Diagram depicting the C-value scale with some example species found in Arkansas. Credit: Andrew Ruegsegger.***

***Frank's sedge (Carex frankii) is much more abundant in Missouri than in Arkansas, an example of how species differ in their tolerance to environmental degradation in different regions. Photo by Andrew Ruegsegger.***

cure on a global level and S1 the most rare on the state level), but has a C-value of 4 in Arkansas.

Wilhelm and Swink came up with two ways of using their newly-assigned C-values in a meaningful way. For one, you could calculate the Mean C based on your species list for any given area. This is just the average of all the C-values for each species. On the other hand, you could calculate the Floristic Quality Index (FQI), which multiples the Mean C by the square root of the number of native species for your site. Research has shown, though, that Mean C is better at assessing ecological integrity, because FQI takes species number into consideration, which might vary for reasons unrelated to site quality (like site area or habitat type).

One last thing. C-values are assigned regionally, because what is actually an intact, stable community is different in different places. Frank's sedge (*Carex frankii*), for example, is found in a much wider range of habitats in Missouri (C-value = 2) than in Arkansas (C-value = 6), where it is more commonly found in moderate- to high-quality wet grasslands.

You live in Arkansas, which would have been a bummer a few months ago, when there was no C-value list for the state. Luckily, though, Theo Witsell (Southeastern Grasslands Institute), Virginia McDaniel (Southern Research Station and our *Claytonia* editor), Brent Baker (Pine Ridge Gardens), Doug Zollner (The Nature Conservancy), Gabriel De Jong (The Nature Conservancy), and Susan Hooks (Ouachita National Forest, retired) published an Arkansas list just this June covering 3124(!) Arkansas taxa. It is available as a free download at phytoneuron.net. According to this list, non-native species are assigned a 0. Weedy and successional taxa are given a 1-3. Taxa that enjoy intact, stable habitats but can tolerate some disruption are 4-7, and conservative taxa with strong fidelity to intact habitats are 8-10.

You read that, generally speaking, a Mean C greater than 3.5 is an indicator of some natural quality and one higher than 4.5 indicates a remnant quality habitat. With this in mind, you spend a day recording as many species as you can identify in your field, which is regrettably less than you'd hoped. Still, you feel as though you got most of them. Besides, you remember reading a peer-reviewed paper showing that only about 60% of the plants needed to be accurately identified to get an effective Mean C. So, you feel about as good as one can when you calculate the average of your C-values and get a Mean C of 2.8. And because it's an average, you feel safe about comparing your field with your neighbor's.

***Johnson grass (Sorghum halepense) is a non-native invasive species in Arkansas, and so it is given a C-value of 0. This species is highly tolerant to disturbance. Photo by Andrew Ruegsegger.***

But we can do a whole lot more with this kind of information than simply comparing sites (though powerful in itself). We can use it to measure the efficacy of different management strategies, or to measure the patterns of community recovery after disturbance. We can compare soil qualities to Mean C across sites to understand what kinds of soil conditions are conducive to remnant, intact, natural communities. We can measure what kinds of human activity have the biggest impacts on habitat quality. A tool that gives us some indication as to how 'natural' a habitat is is pretty powerful. Without something like this, we have a tough time quantifying the goals of conservation, especially in the plant world. What a 'natural' habitat looks like isn't always straightforward, especially to the untrained eye. However, Mean C (and other measures that use C-values not mentioned here) offers a straightforward, accessible way of understanding how intact a habitat is without having decades of ecological and botanical experience. The experts did that part for us already.

# Spring Business Meeting Minutes

Arkansas Native Plant Society Business Meeting Minutes
May 18, 2024
The Center @ Mountain View
116 W. Main St., Mountain View, AR 72560

The Arkansas Native Plant Society held its 2024 Spring Business Meeting on Saturday, May 18, 2024. The Business Meeting began at 6:03 p.m.

President Eric Fuselier called the meeting to order and thanked the members for coming. He encouraged everyone to express their gratitude to Sarah Geurtz for organizing the Spring Meeting. Eric invited comments from those who attended the field trips earlier that day; everyone who spoke expressed their appreciation of the natural areas they visited and the knowledgeable guides who led the walks.

**Dwight Moore Award.** Leslie Patrick announced that the recipient of the Dwight Munson Moore Award for contributions to Arkansas Botany was Sid Vogelpohl for *Know Your Natives*, a compendium of detailed information about selected plants native to Arkansas, published online over the past ten years. She noted that Sid researches each species, makes photographs that reveal in extraordinary detail each plant's physical characteristics, and writes the descriptive copy. Each entry is also reviewed by professional botanists prior to publication. Leslie credited Michael Weatherford for nominating Sid Vogelpohl, noting that Know Your Natives has served to educate ANPS members, Master Naturalists, Master Gardeners, and the general public. She went on to read three additional letters of support from ANPS members. Sid Vogelpohl received a standing ovation and graciously expressed his appreciation for the $500 award.

**Upcoming Events.** It was announced that the Ozark Chapter would conduct a June 15 field trip at Lincoln Lake in Northwest Arkansas, led by Jennifer Ogle of the University of Arkansas Herbarium and Marson Nance of the Northwest Arkansas Land Trust. Webinars would be held on July 13 by Brendan Kosnik and on August 10 by Richard Abbott, the latter on the subject of opposite-leaved woody plants. Maribeth Latvis was invited to present a webinar later in the year, perhaps on grasses.

**Treasurer's Report.** Leslie Patrick noted that the 2024 Spring Treasurer's Report was published in the Spring edition of *Claytonia*, reflecting the organization's financial status as of March 4, 2024. She offered an update reflecting the current (May 18) status, which included additional revenue from meeting registration, membership dues, and merchandise sales. On the expense side, grants and scholarships account for the majority (66%) of the organization's expenditures. Last year's expenses exceeded the budgeted amount, but a core purpose of ANPS is to support individuals who are studying and researching native plants in Arkansas so this is a justifiable investment in people, with benefits that accrue to the organization. Reducible expenses include printing and mailing *Claytonia* and the membership directory—these could be digitized. Currently, members can opt out of receiving the print versions by contacting Membership Officer Molly Robinson. Joe Ledvina reported that he was looking to digitize the ANPS membership system—when done, digital delivery would be the default for these publications; members would be able to opt in to receive print copies.

**Meeting Minutes.** Minutes of the fall business meeting were published in *Claytonia*. Sarah Geurtz moved to accept the minutes as published; Susan Hardin seconded and the motion carried unanimously.

**Memorial Awards.** Jennifer Ogle, Memorial Awards Officer, presented to the membership the recommendations made by the Memorial Awards Committee—and approved by the Board of Directors—for the Aileen McWilliam Scholarships and the Delzie Demaree Research Grants. Scholarship applicants recommended for award were Joshua Poland ($2,000), Natalie Roell ($1,000), and Andrew Ruegsegger ($2,000). Research grants in the amount of $2,000 each were recommended for Russell Morgan (taxonomy and genome size estimations within the genus *Arisaema*) and for Jack Looney (disjunct Appalachian species within the Ozark National Forest). Awards Committee members included Eric Sundell, Ben Benton, and Jennifer Ogle; Virginia McDaniel sat in for Jennifer to avoid conflict of interest related to students/applicants known to her. Eric invited questions; there were none. John Simpson moved that ANPS fund the five applicants in the recommended amounts. Art Browning seconded the motion, which passed unanimously.

It was announced that the Fall ANPS meeting would be held in the vicinity of Mineral Springs.

There being no further business, it was moved by Joe Ledvina, seconded by Margaret Morrell to adjourn. The meeting adjourned at 6:50 p.m.

Respectfully submitted,

Greg Rajsky, Secretary

# Lincoln Lake Field Trip Report

by Samantha Heller

On any warm and humid mid-summer morning, the best possible type of hike is one that covers little distance yet wraps around several distinct types of habitat containing a multitude of unusual plant species; luckily, this was the exact circumstance of the June 15th OCNPS meeting at Lincoln Lake, led by Jennifer Ogle of the University of Arkansas Herbarium and Marson Nance of the NWA Land Trust.

Our path began on an edge of the lake shaded by sandstone bluffs, from under which netted chain fern (*Woodwardia areolata*) grew out of crevices at ground level, an unusual species for the northern part of Arkansas despite its commonality towards the central and southern sections of the state. One of our more conservative wild rye species, the silky wild rye (*Elymus villosus*) sprang out of the same substrate with fresh green inflorescences, as did the petite and charming blunt broom sedge (*Carex tribuloides*). Some uncommon variety of liverwort grew in large patches that crept upward along the stone next to the chain fern.

***Silky wild rye (Elymus villosus). Photo by Jennifer Ogle.***

As we walked further on the trail, we made a small elevation gain but quickly saw species in the sandstone that were adapted to drier conditions. As the chain fern disappeared, it was replaced by various tiny spleenworts (*Asplenium* spp.). The prize of all the plants narrowly squeezing a living out of these hot, sunny sandstone crags was Arkansas Alumroot (*Heuchera arkansana*), an endemic species of the saxifrage family that very carefully stays within the border of Arkansas despite cutting quite close to the borders of several other states. Aside from its limited range, the foliage of this species turns into various shades of orange and deep brown that, as Sarah Nunn once said, put any store-bought Thanksgiving centerpiece to shame, and does so not long after blooming with white candle-like flowers in the late summer or nearly autumn, when most other plants are far beyond flowering. By contrast, though, some boulder-like slabs of sandstone that were eroding downhill did have mesic species growing on them, often being covered in columbine (*Aquilegia canadensis*) and wild hydrangea (*Hydrangea arborescens*). Marson explained that the columbine, hydrangea, and alumroot are actually close compatriots, part of a niche ecosystem that occurs in other bluffs throughout the Ozarks and is ranked as vulnerable (G3) by NatureServe.

***Group photo at Lincoln Lake, with a tall sandstone bluff in the background. Photo by Marson Nance.***

The higher elevations of the trail had more typical open woodland species, such as a variety of goldenrods (*Solidago* spp.) and an even greater spread of native legumes, most notably several species of lespedeza. Whorled milkweed (*Asclepias verticillata*), one of our least common types of the host plant for Monarch butterflies, was also present. Flowers of black-eyed Susan (*Rudbeckia hirta*), fleabane (*Erigeron* sp.), and snoutbean (*Rhynchosia latifolia*) provided pops of cheery summer colors on the understory of a partially open woodland.

In addition to what was seen that day, Lincoln Lake is home to other points of botanical intrigue, such as Texas saxifrage (*Micranthes texana*) and Bradley's spleenwort (*Asplenium bradleyi*).

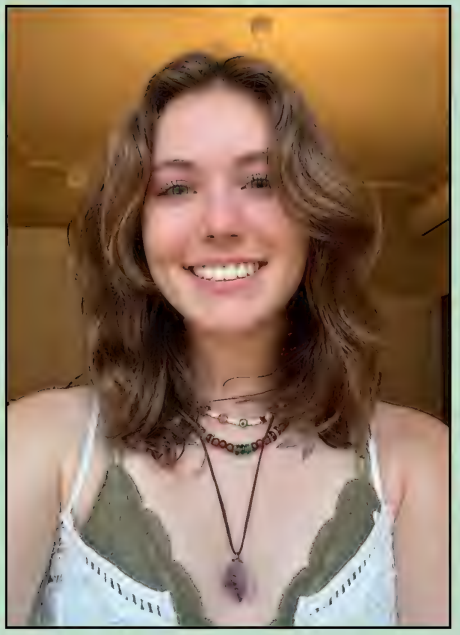
Jennifer and Marson led us across a small inlet of the lake after that, and thus we got to admire a broad assortment of plant communities across nearly the whole spectrum of sun, shade, and moisture levels within just under

# 2024 Grant Recipients

## DELZIE DEMAREE RESEARCH GRANT

L: Morgan Russell, M.S. student at the University of Arkansas, received $2000. Morgan's research is on taxonomy and genome size estimations within the genus *Arisaema*. His advisor is Dr. Jeremy Beauleau. R: Jack Looney, M.S. student at the University of Arkansas, received $2000 to aid in his study of disjunct Appalachian species within the Ozark National Forest. His advisor is Dr. Maribeth Latvis.

## AILEEN MCWILLIAM SCHOLARSHIP



L-R: Josh Poland, Ph.D. student at Arkansas State University, received $2000. Natalie Roell, undergraduate at the University of Arkansas, received $1000. Andrew Ruegsegger, undergraduate at the University of Arkansas, received $2000.

# Fall Webinar Series

Title: ***"Untangling the Biotic and Abiotic Factors that Structure Prairie Pimple Mound Plant Communities"***

Speaker: **Ben Benton**

When: **Saturday, November 2nd at 10am**

**Description**: Prairie pimple mounds (relict nebkhas) provide an ideal system to study how belowground biotic and abiotic factors interact to affect plant communities, in part because they exhibit distinct environmental changes over small spatial scales. In this program you'll learn about research into the relative contribution of root-associated symbionts and soil nutrients as they relate to the regulation of plant communities on prairie pimple mounds.

**Speaker Bio:** Ben Benton is a botanist for the Arkansas Natural Heritage Commission (ANHC) and the curator of the ANHC Herbarium. Ben graduated from Hendrix College in 2020 with a degree in Biology, and is currently pursuing his Masters degree from Arkansas State University. Ben's research at ASU focuses on patterns and process regulating biodiversity.

***Pimple mounds at Flanagan Prairie Natural Area. Photo by Jennifer Akin.***

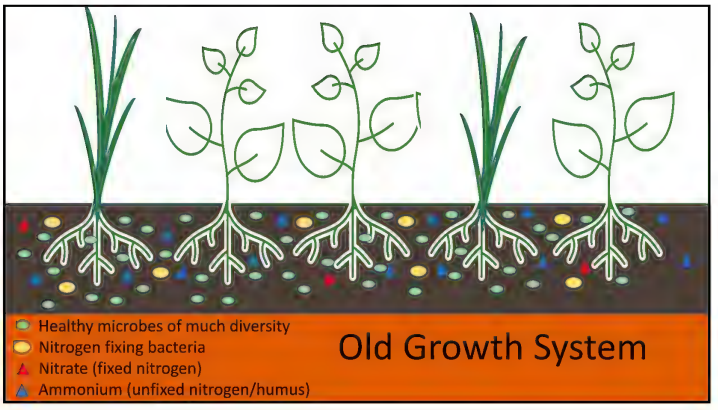
Title: ***"The Amazing World of Wild Plant-Soil Interactions"***

Speaker: **Justin Thomas**

When: **Saturday, November 16th at 5pm**

**Description:** Truly amazing mechanical processes are happening between wild plants and the soils they call home. One could easily say that plants are manifestations of soil health. What are these mechanisms and processes? How do they maintain the wild plants we love? And more importantly, to what degrees are the plants we love dependent on the protection of such interaction? This will be an easy to follow, eye-opening presentation that will also highlight better ways for us to steward the land.

**Speaker Bio:** For 26 years Justin has conducted taxonomic and ecological research and instructed plant ecology and ID workshops for the Institute of Botanical Training and NatureCITE (organizations founded by him and his spouse Dana). Justin is the co-author of the Ecological Checklist of the Missouri Flora and is a research associate with Missouri Botanical Garden. Justin promotes a holistic view of life as a system of study and inspiration.




If you would like to receive webinar announcements and Zoom links, contact Eric Fuselier to be added to the email list (anps.programs@gmail.com). Watch past webinars at youtube.com/channel/UCEIlEFuRaz0HbIgXxwRIHvw.

# ANPS Fall Meeting

## October 4 - 6, 2024 in Hope, Arkansas

All are welcome to attend! Meeting registration is only $10 with no pre-registration required. Registration will begin at 5:00 PM on Friday, October 4, 2024. The meeting events wrap up on October 6 around noon.

**Meeting Location:**
Hempstead Hall
2500 S Main, Hope, AR 71801
Google maps link: https://maps.app.goo.gl/DMs75EfMheSGdzxz8

**Hotels (two options):**

**Holiday Inn Express** (click here for directions link)

Address:
2600 North Hervey St
Hope, Arkansas 71801
Phone: 1-870-722-6262
Website

A discounted rate of $119 + taxes are available for ANPS members. Rooms must be reserved over the phone to receive the discount (be sure to mention that you are with the Arkansas Native Plant Society when making your reservation in order to get the discounted room rate). There is no "block" of rooms reserved – it's a first-come, first-serve situation through the event's date. Breakfast is included. Cancelations must be made 24 hrs prior to arrival.

**Hampton Inn & Suites** (click here for directions link)

Address:
2700 N. Hervey Street
Hope, Arkansas, 71801
Phone: 1-870-777-4567
Website

20 rooms (mixture of bed sizes) have been reserved at $125 a room before taxes. Rooms must be reserved over the phone to receive the discount (be sure to mention that you are with the Arkansas Native Plant Society when making your reservation). Our block of rooms will be held for ANPS only through September 20th. Breakfast is included. Cancelations must be made 24 hrs prior to arrival.

***Brent Baker leads a trip to Cherokee Prairie during the spring 2013 meeting. Photo Bruno Hanke.***

***Brent Baker leads a trip on top of Mt. Magazine during the spring 2013 meeting. Photo Bruno Hanke.***

**Potluck!** We will have a Potluck meal Friday and Saturday evenings. Bring a dish or just come, eat, socialize, and learn!

**Field trips:** Field trips to local areas of top botanical interest will be scheduled for Saturday 8:30 AM - 5:00 PM and Sunday 8:30 AM—12:00 PM.

**Auction:** Don't forget to bring plants and items to enter into the live and silent auctions!

***Auctioneers MaryAnn King and Eric Sundell. Photo by ANPS member.***

Our hikes will offer something for everybody – slow and easy hikes and more vigorous hikes. You must sign up for field trips on Friday evening at the event to allow for adequate logistical planning.

For complete and up-to-date details, go to www.anps.org or contact Sarah Geurtz at sgeurtz.anps@gmail.com; (479) 381-2037.

# OCANPS News

by Sue Hubbard

*OCANPS members at The Nature Conservancy's Logan Springs Preserve. Photo by OCANPS member.*

On Saturday April 27 OCANPS had a field trip at The Nature Conservancy's Logan Springs Preserve near Siloam Springs. The leaders were Laurie Scott from NorthWest Arkansas Community College and Chas McCoy from The Nature Conservancy. As they led us around the Preserve they focused the discussion on land management and the Conservancy's restoration of the preserve. Joe Woolbright was also on the trip and shared his knowledge of land management in NW Arkansas. Danny Barron shared his knowledge of plant identification. Interesting discussions occurred that kept the 12 participants engaged and appreciative of the opportunity to learn about this area.

*Bloodroot (Sanguinaria canadensis). Photo by Eric Hunt*

*OCANPS members learn about the challenges of managing Logan Springs Preserve. Photo by OCANPS member.*

*Christmas fern (Polystichum acrostichoides). Photo by Eric Hunt.*

# Spring Meeting Highlights

# Arkansas Botanical News

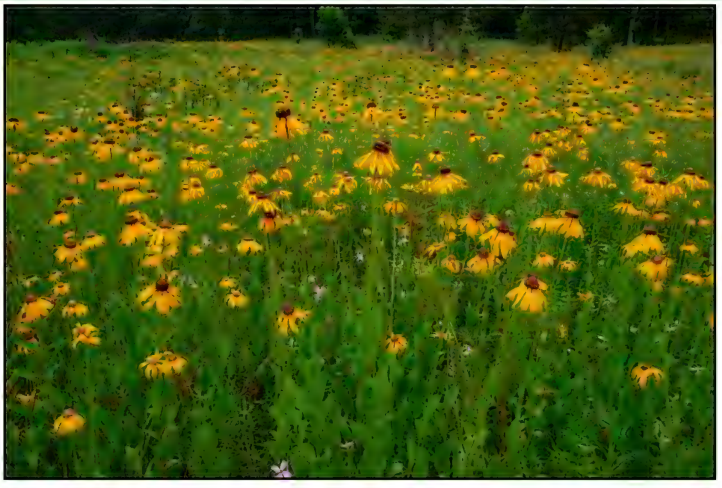
New evidence was recently presented for the splitting of *Rudbeckia grandiflora* var. *grandiflora* and *R. grandiflora* var. *alismifolia* into their own species. First, clear morphological distinctions include *R. grandiflora* having conspicuous spreading hairs (vs. inconspicuous, appressed hairs), 5 prominent veins on the leaves (vs. 3), and phyllaries that are hairy and planar (vs. glabrate and convolute). Additionally, *R. grandiflora* has a more northern distribution (Interior Highlands and Plains) while *R. alismifolia* is more southern in distribution, occurring mostly in the Coastal Plain.

**Kelley, JM. 2024. Evidence for treating two taxa of *Rudbeckia* (Asteraceae) as species. Phytoneuron 2024-28: 1–14. Published 8 May 2024.**

A new species of hawthorn has been named in honor of avid Arkansas botanist and plant collector Jim Keesling. Jim while a late bloomer who came to botany after he retired, has dedication and attention to detail that leaves most professional botanists in the dust. His work has yielded many state records, previously unknown populations of rare species, and other important finds. Jim made countless trips to photograph and collect specimens of the taxonomically tricky genus *Crataegus* (hawthorns) across the state, often visiting the same plants multiple times to capture leaves, flowers and fruits. He rediscovered populations of two Arkansas endemic hawthorns described in the 1920s and believed to be extinct: *Crataegus ouachitensis*, and *C. ouachitensis* var. *minor*. His specimens from these populations helped taxonomists prove that *C. ouachitensis* var. *minor* was in fact not closely related to *C. ouachitensis*. Those plants have now been reclassified at the species level and named *Crataegus keeslingii* in recognition of his time, effort, and contributions to Arkansas botany.

***Keesling's hawthorn (Crataegus keeslingii). Photo by Jim Keesling.***

**Witsell, T. and R. Lance. 2024. Clarification of the status of *Crataegus ouachitensis* (Rosaceae) and a re-evaluation of its var. *minor*. Phytoneuron 2024-55: 1–14. Published 18 July 2024.**



***Rough coneflower (Rudbeckia grandiflora) at Camp Robinson Special Use Area. Photo by Eric Hunt.***

Coefficients of conservatism (c-values) have been developed for the state of Arkansas! C-values are values given to plant taxa to describe and rank their fidelity to habitat quality and/or stability within a given region. For a more in-depth explanation of what they are please see Andrew Ruegsegger's article on page 10-11 of this issue.

**Witsell, T., V.L. McDaniel, B.T. Baker, D.M. Zollner, G.L. De Jong, S.L. Hooks. 2024. Coefficients of conservatism for the vascular flora of Arkansas. Phytoneuron 2024-46: 1–99. Published 22 June 2024.**

Dumping non-native species, be they innocent plant bulbs or 15-foot Burmese pythons, is not a good idea. The first naturalized population of copper-tips (*Crocosmia* X *crocosmiiflora*) was recently found in Arkansas in Miller County. The origin was likely horticultural discards and the population size is now about 200 plants. We all know how well non-native species can grow in the absence of their natural predators.

**Serviss, B.E. and J.R. Kratz. 2024. First record of *Crocosmia* x *crocosmiiflora* (Iridaceae) in the naturalized Arkansas flora. Phytoneuron 2024-56: 1–6. Published 8 August 2024.**

Another new addition to the state of Arkansas through naturalization is paperplant (*Fatsia japonica*) which was found in highly disturbed urban woods within the city limits of Magnolia in Columbia County. Birds are the likely transporters.

**Serviss, B.E. and J.R. Kratz. 2024. First record of *Fatsia japonica* (Araliaceae) from the naturalized Arkansas flora. Phytoneuron 2024-57: 1–4. Published 8 August 2024.**

# "My Eye was Caught by a Bright Blue Delphinium": Dwight M. Moore's Discovery of *Delphinium newtonianum*

by Susan Young

It doesn't take long once you're in the University of Arkansas Herbarium (UARK) to feel like you're being watched. There, herbarium collections manager Jennifer Ogle has assembled a lovely tribute to UARK's roots (ha!) that includes photos of the herbarium's botanists from days gone by. And they're all looking at me: Francis LeRoy Harvey, Delzie Demaree, Dwight M. Moore, John T. Buchholz, Jewel E. Moore, Hugh Iltis, Maxine Hite, and Edwin B. Smith. As a UARK volunteer I feel an obligation to do right by these scientists who tromped all over Arkansas and beyond to collect so many of the 130,000+ vascular plant specimens housed at UARK today. And while Jennifer also inspires a deep allegiance among all the UARK volunteers, her story is one for me to write another day. Today my mind is on Dwight Moore, professor of botany at the University of Arkansas (UA) from 1924 to 1957. During those years Dr. Moore collected thousands of specimens and helped expand UARK's collection tremendously. He also became nationally known as an expert on Arkansas plants.

***Moore's delphinium (Delphinium newtonianum) was discovered by Dr. Dwight Moore, botany professor at the University of Arkansas and curator of the UARK Herbarium, in 1935.***

A few months ago, Jennifer pointed out that 2024 would mark the centennial of Moore's arrival in Arkansas. I have an unabashed geeky love for historical research, so I piped up and offered to write a brief history of Moore's life as a way to honor him. Welp, Jennifer gently broke the news to me that this had already been done. In 1985, Gary Tucker and Gwen Barber wrote a very fine chronicle of Moore's life, "Dwight Munson Moore, 1891–1985" for the *Journal of the Arkansas Academy of Science*. (See a summary of this article on p. 1 in this issue of *Claytonia*.)

A tip from Jennifer then led me to Moore's papers housed in Special Collections at the UA Libraries. I decided to peruse the collection in hopes of finding an interesting anecdote or two to bring some attention to Moore during this 100th anniversary year. Since I'm no botanist, it would be a human-interest story rather than a scientific paper.

And boy oh boy, I found a gold mine of humanity in the Dwight Moore Papers, and a lot of botany, too. So many letters from former students and botanists and scientists and garden club presidents and extension agents and everyday folks who just wanted to know about a plant they found in the woods or a pasture. More than enough material for a book, I became paralyzed with wanting to include everything, which led to me writing nothing.

Then in early June of this year, Jennifer turned to her Wednesday morning UARK crew (herbarium technician Brittney Booth and volunteers Donna Gwaltney and yours truly) and spoke these blessed words: "Let's go on a field trip to see Moore's delphinium." A few days later we traveled to the approximate location south of Jasper in Newton County where in 1935, Moore first spied what would turn out to be a new species of delphinium, and one endemic to Arkansas to boot. Unbeknownst to me, that day trip would release me from the bonds of writer's block and provide me with the gift of a story.

And that is how I came to write this, an account of Dwight Munson Moore's 1935 discovery of *Delphinium newtonianum*.

******

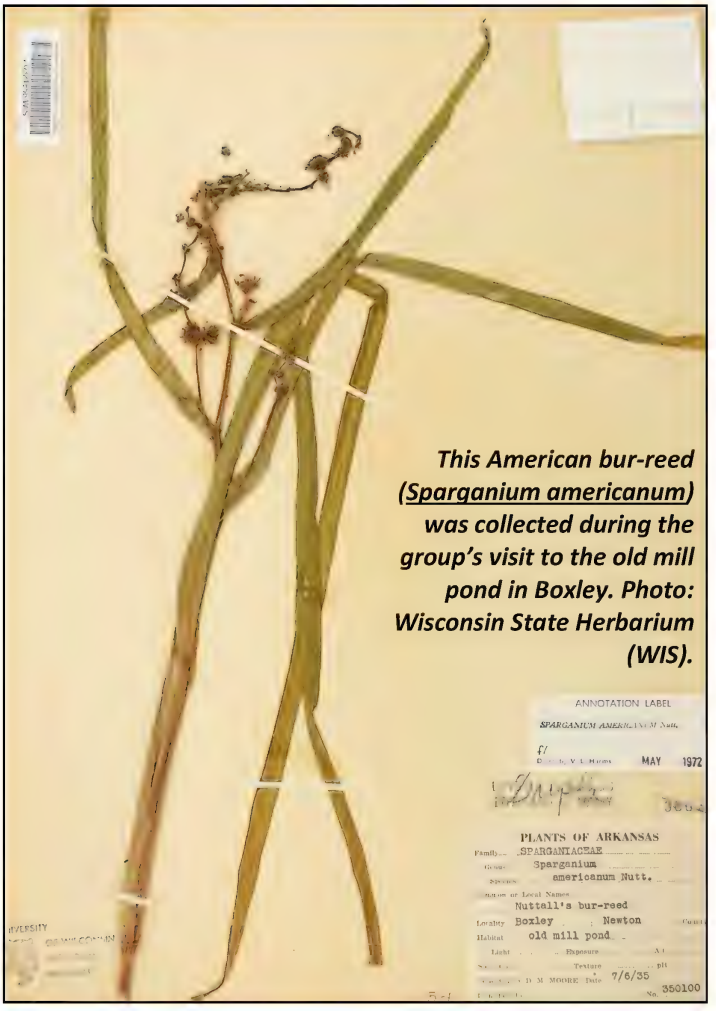
On July 4, 1935, Dr. Dwight Moore, UA zoology professor Dr. David Causey, and Ed Wheat of Lonoke, Arkansas, set out on a collecting expedition in Newton County, Arkansas. A week later, Moore described the trip in a letter to a former student, William Giles. Here's an excerpt:

> "You would have been very much interested in the trip I made into Newton County from July 3 to July 7. We left Wednesday afternoon... went direct to Jasper after

eating supper in Harrison, stopped at Marble City Falls and collected some nice specimens of *Selaginella rupestris* along with several mosses. After arriving in Jasper we went to the cave, talked with Mr. Pruitt the manager, and since Dr. Causey wanted to take a little net in to see if he could get any aquatic animals, I thought I could get them in for the special rate. What was my surprise when, after talking of the cave and its possibilities, need of good roads, etc. we were told to go on in, the guide would take us through, and there would be no charge. We found no animal life in the cave at all except one gnat about half way back. I did collect about four different kinds of fungi, fruiting on the planks and timbers.... Leaving Jasper the next morning, the fourth, after we drove up the long hill, my eye was caught by a bright blue delphinium in the edge of the wood. I stopped to look at it, and it seemed entirely different from anything we have. The only thing it would key out to in the manuals is *D. tricorne*, which according to our accepted belief, blooms in April and May on a thick stalk a foot or 18 inches high. This one was diffusely branched with slender divisions standing in many cases thirty inches tall. The three carpels were wide spread as in *tricorne*, and the roots were more or less tuberous, but the fruits were shorter and the leaves different from any specimens of *tricorne* we have in the herbarium. It looks to me like a new species. What shall we call it? Penetrating the woods a little farther, we found a dead log covered with mosses and about six different kinds of slime molds.... I put specimens of the different kinds into little tin boxes trying to get them in there in such a way that they would not break, but the roads were so rough that we did not succeed in getting more than one or two of them back safely...."

A few words of explanation regarding this excerpt from Moore's letter; based on my research I believe this information to be accurate. 1) Ed Wheat was an educator and Lonoke County school supervisor. I have yet to discover how he and Moore knew each other. 2) The cave Moore mentions is Diamond Cave, a popular tourist attraction at the time. "Mr. Pruitt" is Jonah Pruitt, who bought the cave in 1922 and sold it a few years later to the Diamond Cave Corporation but stayed on as a major stockholder in the business.

Let's also pause here to consider what traveling in this neck of the woods was like in July 1935. I found no mention in Moore's papers of the vehicle they drove. But we can be sure the car wasn't air conditioned, since that luxury wasn't offered in automobiles until 1940. State Highway 7, the main road in Newton County used by Moore et al., was designated on a 1936 road map as a "bituminous surfaced road," which was created by laying down a mixture of liquid asphalt and crushed gravel. It's a step above a dirt road, but a long way from a modern-day paved highway. And with Newton County's abundant hills and hollers to traverse, there was no getting anywhere fast. Moore didn't mention their overnight lodging in Jasper on this trip, but in correspondence a few years later, he wrote, "At Jasper the Commercial Hotel is the place I usually stay. They serve good meals, family style, and the beds are reasonably comfortable. The prices I believe are 75 cents for the room and 35 cents per meal. It is only semi-modern. They have a bath with tub or shower but you have to go outside for other purposes. However, it is as good as Jasper has to offer."




***This American bur-reed (Sparganium americanum) was collected during the group's visit to the old mill pond in Boxley. Photo: Wisconsin State Herbarium (WIS).***

Returning now to Moore's letter: He described the rest of the trip, which included fern collecting at Freeman Springs (near the present-day Rotary Ann Overlook on Highway 7 in Pope County) and a return to Newton County for more fern collecting, an exploration of the mill pond at Boxley, and a hike to "the top of the hill above the zinc mines and nearby ledges" where the find of the day was "a mallow which seems to be a species of *Abutilon* which is not the one listed in Gray and is not described in any of the other manuals."



*(Continued on next page)*

Moore finished the letter by noting that "the delphinium was of sufficient interest to lead me to go back there with some color films and get some pictures of it." He did just that in late July 1935 and found "the delphinium was all in fruit. No blossoms to be found. That gives further data as to its blooming season." The blooming season of this delphinium was very uncharacteristic of the known Arkansas members of the genus, a big clue that Moore had indeed discovered a new species.

Moore's papers are remarkably quiet about his discovery until an August 1938 letter from Merritt L. Fernald, respected botanist, director of Harvard's Gray Herbarium, and editor of *Rhodora*, the journal of the New England Botanical Society (then the New England Botanical Club). In that letter, Fernald wrote, "Your article on the new delphinium has come and I have been over it with Mr. Weatherby [the associate editor of *Rhodora*]. The paper can be handled in *Rhodora* sometime during the next year. This current volume and the first several numbers of the next volume are already overcrowded so that I cannot guarantee when we can get to your publication."

Seven months later, by March 1939, Moore's article had yet to appear in *Rhodora*. He diplomatically inquired of Fernald, "Now that 1939 is well under way I am wondering just how the condition of *Rhodora* is progressing and when it will be possible to get to my paper on the new delphinium.... If it is still to be a month or two away I might supply a better photograph of the type material but I would prefer not to do this if it would delay in any way the appearance of this paper. I hope that it can be worked into the journal not later than the April or May numbers...." Moore's paper, "*Delphinium newtonianum*, A New Species," finally appeared in the May 1939 *Rhodora*.

I hope you'll read Moore's *Rhodora* paper for yourself. It's available online at archive.org/details/biostor-180081. But I want to take a minute here to point out a couple of items in the paper that I find delightful. Firstly, Moore proposed naming the new species *D. newtonianum* after Newton County, Arkansas, where he first found the delphinium, and also after his father, Newton Moore, who inspired Dwight Moore's study of botany. Secondly, Moore recorded the flower color spectrum of *D. newtonianum* as a "reasonably constant, though variable" blue. Using Maerz and Paul's *Dictionary of Color*, which assigns a unique alphanumeric identifier along with a descriptive name to each color in the spectrum, Moore studied 31 specimens of *D. newtonianum* and found 15 different shades of blue. He listed the blues by their alphanumeric names such as 34B6 or 43E12, which is important for scientists, but not very jazzy to the non-botanist. However, tracking down the descriptive color name that accompanies the alphanumeric identifier brings some fun to the Maerz and Paul numbering system. In the case of Moore's survey of 31 *D. newtonianum* specimens, we find Directoire Blue (43A11), Cathedral Blue (43C10), Diva Blue (43B10), Blue Lavender (43B7), Periwinkle (43B8), Liberty (43C12), Regatta (43C12), Della Robbia (43C11), Hathor (43D12), and Luxor (43B11, the most common color in Moore's 31 samples).

***The flower color on this 1936 specimen of Moore's delphinium is holding true nearly 90 years after the plant was collected.***

For my money, when I saw *D. newtonianum* in the wild with my own eyes that day in June, I was immediately transported back to the Crayola "Cornflower" blue crayon of my childhood, which was (still is) my favorite crayon color of all time. Sparking that memory is lovely enough all by itself. But even more so is the day spent with my herbarium pals, retracing Moore's footsteps to a relatively remote location (still blissfully so, compared to the Northwest Arkansas I-49 corridor) where he discovered something new in these old Ozarks, and where it remains with us still today.

# 2024 Fall Treasurer's Report

| 2024 Fall Treasurer's Report | | | | | | Proposed 2025 Budget |
|---|---|---|---|---|---|---|
| | | | January 1 - August 9, 2024 | | | |
| | | | **Cash Start 2024** | | **$18,176.40** | |
| | 2023 Actual | 2024 Approved Budget | 2024 Actual | | | |
| INCOME | | | | | | |
| Membership Dues | $4,253.30 | $6,500.00 | $4,075.00 | | | $4,500.00 |
| Meeting Registration | $1,630.11 | $1,600.00 | $610.00 | | | $1,500.00 |
| Plant/Silent Auction | $703.58 | $1,100.00 | $552.00 | | | $1,000.00 |
| T-Shirt, Hat, Book Sales | $1,912.19 | $1,800.00 | $310.00 | | | $1,000.00 |
| Contributions/Grants | $1,252.00 | $2,000.00 | $339.63 | | | $2,000.00 |
| Income Total | $9,751.18 | $13,000.00 | $5,886.63 | | **$5,886.63** | $10,000.00 |
| | | | | | | |
| | | | | | | |
| EXPENDITURE | | | | | | |
| ANPS.Org (website domain/wordpress) | $189.96 | $190.00 | $99.00 | | | $190.00 |
| Claytonia (Print & Distribute 2 Issues) | $2,334.06 | $2,000.00 | $1,175.92 | | | $2,400.00 |
| Directory (Print and Distribute) | $1,432.57 | $1,450.00 | $1,435.61 | | | $1,500.00 |
| Memorial Awards/Scholarships | $12,000.00 | $6,000.00 | $9,500.00 | | | $10,000.00 |
| Grants/Support to Public Garden | $0.00 | $1,000.00 | $1,020.00 | (pending)* | | $1,000.00 |
| Meeting expenses (venue, speakers, e | $464.41 | $1,000.00 | $757.26 | | | $1,000.00 |
| SWS: AR Eco Tour | $250.00 | $0.00 | $0.00 | | | $0.00 |
| Ecology Camp | $0.00 | $0.00 | $0.00 | | | $0.00 |
| Bulk Mail | $290.00 | $290.00 | $320.00 | | | $320.00 |
| PayPal/Square fees | $35.43 | $100.00 | $75.35 | | | $100.00 |
| Zoom (webinar series) | $162.83 | $163.00 | $159.90 | (pending, plus tax) | | $163.00 |
| Supplies/postage/fees/misc | $215.17 | $100.00 | $154.04 | | | $200.00 |
| T-shirts/Hats/Books Purchases | $1,139.25 | $800.00 | $0.00 | | | $500.00 |
| Tabling (ASB, MG) | $0.00 | $0.00 | $0.00 | | | $0.00 |
| Expenditure Total | $18,513.68 | $13,093.00 | $14,697.08 | | **$14,697.08** | $17,373.00 |
| | | **Cash Balance August 9, 2024** | | | **$9,365.95** | -$7,373.00 |

*Pending submission of receipts for native plants purchased for a garden at All Saints Lutheran School in Jonesboro; grant awarded Oct 2023.

Submitted: Leslie Patrick, ANPS Treasurer

# President's Message

What a summer! It's been incredibly dry this year, but fortunately some of our more drought-resistant species have been continuing to bloom. I know I've been enjoying the persistence of the ironweed and royal catchfly out at my place, even if most of everything else hasn't been flowering. And similar to those species who continue to give even when the well has run dry, I'd like to also acknowledge the persistence of a couple of longtime board members who recently passed the torch after many years of service to the Arkansas Native Plant Society.

***Baldwin's ironweed (Vernonia baldwinii). Photo by Eric Hunt.***

First, after twelve years of loyal service to the ANPS as our Membership Officer and Publisher (doing both jobs for longer than he should have!), Mike Burns stepped down as Membership Officer at the end of 2018 and remained on the board as Publisher until the end of 2023. We are very grateful to Mike for the wonderful job he did keeping the membership file up-to-date and making sure that the membership directory and newsletter arrived in our mailboxes. We hope that you will join us in thanking him as well. Luckily, Joe Ledvina, who did an amazing job as our President in 2023, volunteered to fill Mike's shoes in the Publisher position.

Second, after six years as our Secretary, Margaret Lincourt also stepped down at the end of 2023. We want to acknowledge the wonderful job Margaret did recording our meeting minutes, revising our bylaws, and recording the bids at our live auctions. Please join us in thanking her as well. And thank you to Greg Rajsky for volunteering to pick up the torch Margaret has passed and serve as our new Secretary.

Once again, Sarah Geurtz has been working very hard to plan the fall meeting in the southwestern part of the state, and I for one am getting excited. This is turning out to be one for the record books, so mark your calendars and make your reservations now folks! We look forward to seeing you in October!

– Eric Fuselier, ANPS President and Program Officer

# Arkansas Native Plant Society Membership Application

**Membership Categories**

_____ $10 Student
_____ $15 Individual
_____ $20 Supporting
_____ $25 Family
_____ $30 Contributing
_____ $150 Lifetime (age 55+)
_____ $300 Lifetime (under age 55)

_____ New Member
_____ Renewal
_____ Address Change

_____ Opt in to receive paper *Claytonia*

**Name(s)** _____

**Address** _____

**City** _____ **State** _____ **Zip** _____

**Phone** _____ **Email**_____

Mail this completed form with a check made payable to the Arkansas Native Plant Society to:

Leslie Patrick, Treasurer
15 Pinecrest Court
Conway, Arkansas 72032

**JOIN OR RENEW ONLINE INSTEAD! Details at anps.org/join.**

# Claytonia

Virginia McDaniel | Editor
virginiamcd31@yahoo.com


**Please check your mailing label!**
The calendar year is the membership year. If your mailing label says "23" or earlier it's time to renew. Life members have an "LF" on their label.

To renew your membership, fill out the application for membership on page 20 and mail it to the address on the form.
Or renew online at **anps.org/join**.

# ATTENTION

ANPS Members! Please READ this!

Starting Spring 2025 we will be **switching to an all digital mailing of our newsletter *Claytonia***. If you would still prefer to get your *Claytonia* via snail mail please send a note to Molly Robinson at:

anps.membership@gmail.com
OR
2014 Scott St. Apt 3
Little Rock, AR 72206

Reason: Over the years the number of grants and scholarships we have given out has increased due to increased attention to Native Plants in our society. This is wonderful! However, funds coming into ANPS has not kept up and hence we are looking for to trim expenditures. The mailing of the newsletter is one of our biggest expenses, so if we can reduce the number of mailings we can have money to support the botany students and native plant projects that need us!

*If you do not receive e-mails from ANPS and would like to, please send **anps.membership@gmail.com** an updated email address.*

## 2024 ANPS OFFICERS

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